Vendor Analysis Program

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Vendor Profiles

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U.S. Information Services Vendor Analysis Program

Vendor Profiles

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Key to Table of Contents

Primary Markets

Industry Specific

Bank	- Banking and finance
BServ	- Business services (accountants, lawyers)
Dis	- Distribution
DMan	- Discrete manufacturing
Educ	- Education
Fed	- Federal government
HS	- Health services
Ins	- Insurance
Loc	- Local government
Man	- Manufacturing
PMan	- Process manufacturing
PServ	- Personal/consumer services
RSal	- Retail sales
St	- State government
Tele	- Telecommunications
Tran	- Transportation
Util	- Utilities
WSal	- Wholesale sales
Misc	- Construction/agriculture

Cross Industry Application Solutions

AC	- Accounting
ES	- Engineering/scientific
ET	- Education and training
HR	- Human resources
OS	- Office systems
PA	- Planning and analysis
SA	- Sales/marketing

Other

CASE	- Computer-aided software engineering
COM	- Computer output microfilm
DB	- On-line data base services
DR	- Disaster recovery
EC	- Electronic commerce
INT	- Internet

Product/Service Offering

1 = Processing Services
2 = Network Services
3 = Applications Software Products
4 = Systems Software Products
5 = VAR/Turnkey Systems
6 = Professional Services
7 = Systems Integration
8 = Outsourcing

CONTENTS

Company Name	Date	Primary Markets	Primary Product/ Service Offering
Action Technologies, Inc.	12/95	Cross/PA/INT	3, 4
Acxiom Corporation	7/96	Cross/SA	1, 2, 5
Adobe Systems, Inc.	5/96	Cross/OS	4
ADP Financial Services	3/96	Bank	8, 3
Advantis	6/95	Cross	1, 2, 8
Affiliated Computer Services, Inc.	3/96	Bank, Cross	1, 8, 7
ALLTEL Information Services, Inc.	8/96	Bank, HS, Tele	8, 3
America Online, Inc.	4/96	Cross/DB	2
American Business Computer See: Sterling Commerce, Inc.			
American Management Systems, Inc.	5/96	Tele, Bank, Fed, Loc, Educ	6, 7
American Software, Inc.	2/96	Cross, DMan, Dis, HS	3
Ameritech Corporation	10/95	Cross	2, 6, 7, 3
Anacomp, Inc.	3/96	Cross/COM	1
Analysts International Corporation	1/96	Cross	6
Andersen Consulting	5/96	Cross	7, 6
Applix, Inc.	8/96	Cross/INT	4
Arkansas Systems, Inc.	2/96	Bank, Cross	3, 4, 6
Arthur D. Little, Inc.	8/96	Cross	6
AT&T Global Information Solutions (name changed to NCR)	7/95	Bank, RSal, Tran, Man, Tele, St	6, 7, 3, 4

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AT&T Solutions	6/96	Bank, Man, Dis, Tran, Tele, Util, HS	6, 7, 8
Autodesk, Inc.	7/96	Cross/ES	3
Automatic Data Processing, Inc.	6/96	Cross/HR, AC	1, 2
Auto-trol Technology Corporation	8/96	DMan, PMan, Util	3, 5, 6
Avalon Software, Inc.	5/94	DMan, PMan, Dis	3
Baan Company, N.V.	6/95	DMan, Dis	3
BACHMAN Information Systems, Inc. (name changed to Cayenne Software)	2/96	Cross/CASE	4
Bell Atlantic Corporation	5/96	Cross	6, 3, 4, 7
Bell Atlantic Business Systems Services See: DecisionOne Corporation			
Bell Atlantic Network Integration, Inc.	8/96	Bank, Educ, BServ, HS, St	7, 8
BellSouth Corporation	11/95	Cross	2, 7
BISYS Group, Inc. (The)	2/96	Bank	1, 8
Boeing Information Services	4/94	Fed	6, 7
Boole & Babbage, Inc.	3/96	Cross	4
Boston Consulting Group, Inc.	5/96	Cross	6
Brainstorm Technologies, Inc.	3/96	Cross	4
Broadway & Seymour, Inc.	10/95	Bank	7, 6, 3
Broderbund Software, Inc.	8/96	PServ, Educ	3
BSG Alliance/IT, Inc.	4/96	PMan, Ins, Tele, Tran	6, 7
Business@Web, Inc. (name changed to OneWave, Inc.)	4/96	Cross/INT	3, 6
CACI International	2/94	Fed	6, 8
Cadence Design Systems, Inc.	6/96	Cross/ES	3
Cambar Software, Inc.	2/96	WSal, DMan	3
Cambridge Technology Partners, Inc.	6/96	Ins, Man, Bank, Tele	6, 7
Candle Corporation	6/94	Cross	4
CAP GEMINI America	7/96	Cross	6, 7
Ceridian Corporation	4/95	Cross/Fed	1, 7
Ceridian Employer Services	4/95	Cross	1
Checkpoint Software Technologies, Ltd.	7/96	Cross/INT	4

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Cincinnati Bell Information Systems Inc.	8/96	Tele, Fed	1, 3, 6
Cincom Systems, Inc.	6/96	Cross, Man	4, 3
Cisco Systems, Inc.	5/95	Cross	--
Comdisco Disaster Recovery Services	9/96	Cross/DR	1, 8
Complete Business Solutions, Inc.	2/96	Cross	6, 7
Compression Labs, Incorporated	6/96	Cross	5
CompuServe Incorporated	4/96	Cross/DB	2, 3
Computer Associates International, Inc.	1/96	Cross, DMan	4, 3
Computer Horizons Corp.	6/96	DMan, PMan, Tele, Bank	6, 7
Computer Outsourcing Services, Inc.	4/96	Cross/HR,DMan, PMan, HS	1, 8
Computer Sciences Corporation	2/96	Fed, Man, Bank, Ins	6, 7, 8
Computer Task Group, Inc.	9/96	DMan, PMan, Bank BServ	6, 7
CompuTrac, Inc.	6/96	BServ	5
Compuware Corporation	3/96	Cross	4, 6
Comshare, Inc.	2/96	Cross/PA	3, 6
Consilium, Inc.	3/96	DMan, PMan	3, 6
Continuum Company, Inc. (The) (acquired by Computer Sciences Corp)	1/96	Ins, Bank	6, 3, 1, 8
Coopers & Lybrand Consulting	5/96	Cross	6, 7
Cordant, Inc.	3/95	Fed, DMan, PMan	7, 6
Corporate Computing International	9/94	Cross	4, 6
Corporate Systems, Ltd.	10/95	Cross/HR	1, 6
CSG SYSTEMS, Inc.	4/95	Tele	1
Cutler-Williams, Inc.	2/95	Cross	6, 7
CyberGuard Corporation	8/96	Cross/INT	4
CyCare Systems, Inc. (acquired by HBO & Company)	5/95	HS	1, 5, 8
Daly & Wolcott, Inc.	7/95	Dis, Man	3, 6
DataTimes Corporation	4/95	Cross/DB	2
DataWorks Corporation	3/96	DMan	3
DecisionOne Corporation	4/96	Cross	6, 8

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Deloitte & Touche Consulting Group/ICS	9/96	Cross	6
Delphi Information Systems, Inc.	3/96	Ins	5, 6
Delta Consulting Group, Inc.	5/96	Ban, HS, Man, Tele	6
Dialog Information Services, Inc. See: Knight-Ridder Information, Inc.			
Diba, Inc.	9/96	Cross/INT	4
Digital Equipment Corporation	1/96	Cross	7,8, 6, 4
Dimension X	8/96	Cross/INT	4
Donnelley Enterprise Solutions, Inc.	3/96	Cross	6, 7, 8
Dun & Bradstreet Software	6/94	Cross/HR/AC DMan	3
Easel Corporation	5/94	Cross	4
EDS	7/96	Bank, Ins, Fed St, DMan, Tele	1, 6, 7, 8
ENTEX Information Services	9/96	Cross	5, 7
Equifax Inc.	5/96	Ins, Bank, RSal	1, 2, 3
Ernst & Young LLP Management Consulting	9/95	DMan, PMan, Ins, Bank, Util, Tele, HS	6, 7, 8, 4
First Data Corporation	6/96	Bank, RDis, HS, Cross	1
FIserv, Inc.	5/95	Bank	1, 2, 8, 3
Friedman Associates	2/96	DMan, PMan, WSal	3
Frontier Technologies Corporation	8/96	Cross/INT	4
Geac Computer Corporation Limited	9/96	Bank, Pserv, Man Loc	3, 5
GE Information Services	9/95	Bank, DMan, PMan, Cross	1, 2
General Magic, Inc.	7/96	Cross/INT	3, 4
GENESYS Software Systems, Inc.	12/94	Cross/HR	3
Genix Group (The) (acquired by Affiliated Computer Services)	4/96	PMan, DMan, Bank, Ins, HS	8
Global Internet Access Services, Inc.	8/96	Cross/INT	7, 2, 4
Gupta Corporation (name changed to Centura Software)	5/95	Cross	4
Harte-Hanks Data Technologies	9/96	Cross/SA	1, 3
HBO & Company	11/95	HS	5, 1, 6

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Health Data Sciences Corporation	2/95	HS	5
Hewlett-Packard Company	4/95	Cross	6, 7, 8
Hogan Systems, Inc. (acquired by The Continuum Company)			
Hyperion Software Corporation	2/96	Cross/AC/HR	3
IBM Integrated Systems Solutions Corporation	7/95	Bank, Ins, HS, Dis, Tran, Man, Tele, Util	8, 7, 1
iCat Corporation	9/96	Cross/INT	4
IMREX Computer Systems, Inc.	10/94	WSal, RSal, DMan	3, 6
I-NET, Inc.	9/96	Fed, Ener, Man, Bank HS	7, 8
Infonet Services Corporation	7/96	Cross	2, 8
Information America, Inc. (acquired by West Publishing)	5/94	BServ	2
Information Builders, Inc.	8/95	Cross	4, 6
Informix Software	4/95	Cross	4, 3
Infoseek Corporation	9/96	Cross/INT	4
InPower	9/95	Cross/HR	3
Integral Systems, Inc.	2/94	Cross/AC/HR	3
Intuit Inc.	3/96	Cross, Pserv	3
ISM Information Systems Management Corporation (acquired by IBM Canada)	7/94	Fed, St, Bank	8, 7, 1, 2
Jack Henry & Associates, Inc.	1/96	Bank	5, 1,7, 8
J.D. Edwards & Company	3/95	Cross/AC/HR	3
Keane, Inc.	11/94	Cross	6
Kenan Systems Corporation	7/95	Tele, Man, Bank, Fed	3, 6
Knight-Ridder Information, Inc.	7/95	Cross/DB	2
KPMG Peat Marwick L.L.P.	5/96	Cross	6, 7
Lante Corporation	9/94	Cross	6
Lawson Software	2/96	Cross/AC/HR	3, 6
LEGENT Corporation (acquired by Computer Associates)	5/95	Cross	4
LGS Group Inc.	9/95	Cross	6, 7, 8
Liant Software Corporation	2/96	Cross	4
Litton Computer Services	6/96	Cross	1, 2, 7, 8

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Logica Inc.	1/95	Bank, Ins, Tele	6, 7
Lotus Development Corporation (acquired by IBM)	6/95	Cross	3
Macromedia, Inc.	8/96	PMan, Cross/INT	3, 4
Manugistics Group, Inc.	9/95	Cross	3, 4
Marcam Corporation	5/95	PMan	3
May & Speh, Inc.	4/96	Cross	1, 8
McKinsey & Company, Inc.	8/95	Cross	6
MDIS North America	5/95	DMan, Cross	3, 4
Mead Data Central (name changed to LEXIS-NEXIS)	6/94	Cross/DB	2
Medical Information Technology, Inc. (MEDITECH)	3/96	HS	3
Meta-Software, Inc.	12/95	DMan	3, 6
Microsoft Corporation	4/96	Cross/OS	3, 4, 2
M&I Data Services, Inc.	6/96	Bank	1, 3, 8
Milkyway Networks Corporation	9/96	Cross/INT	4
Moore Business Communication Services	6/96	Cross	1
National Data Corporation	2/96	RSal, Bank, HS	1, 2, 5
NETCOM On-Line Communication Services, Inc.	11/95	Cross/INT	2
Netscape Communications Corporation	5/96	Cross/INT	3, 4
NeXT Software, Inc.	9/96	Cross/INT	4
Novell, Inc.	3/96	Cross	4
Omnipoint Corporation	9/96	Cross	2
Open Market, Inc.	7/96	Cross/INT	4
Oracle Corporation	4/96	Cross	4, 3
O'Reilly & Associates, Inc.	8/96	Cross/INT	4
Pacific Telesis Group	6/94	Cross	2, 6, 7
Parametric Technology Corporation	2/96	DMan	3
Paychex, Inc.	9/96	Cross/HR	1, 8
Pentamation Enterprises, Inc.	10/94	Educ, St, Loc	3, 6
PeopleSoft, Inc.	9/96	Cross/HR	3
Perot Systems Corporation	7/96	Cross	6, 7, 8
PictureTel Corporation	8/96	Cross	5

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PKS Information Services, Inc.	5/95	Cross	8
Platinum Software Corporation	3/96	Cross	3
PointCast, Inc.	9/96	Cross/INT	2
Policy Management Systems Corporation	7/95	Ins	1, 3, 8
Power Computing Company	5/94	Cross	8, 6, 1
PRC Inc.	7/94	Fed	6, 7
Progress Software Corporation	6/94	Cross	4
PSINet, Inc.	8/96	Cross/INT	2, 4
QAD, INC.	4/95	DMan, PMan	3, 6
QUALCOMM Incorporated	4/96	Cross, Tran	2, 5
Quarterdeck Corporation	8/96	Cross/INT	4
Radnet, Inc.	8/96	Cross/INT	4
RAILINC	6/96	Tran	2
Raptor Systems, Inc.	8/96	Cross/INT	4
Ross Systems, Inc.	2/96	Cross/AC, Man	3
RSA Data Security, Inc.	5/96	Serv	4, 6
SAP America, Inc.	2/95	Cross/AC	3
Sapient Corporation	3/96	Cross	6
SAS Institute Inc.	5/96	Cross/PA	3, 4
Science Applications International Corp.	8/96	Fed, St, Loc,Tran	6, 7, 8
SCO	8/96	Cross	4
SEI Corporation	5/94	Bank	1, 8, 3
Shared Medical Systems Corporation	6/96	HS	8, 1, 3, 5
Shaw Systems Associates, Inc.	11/94	Bank	3
SHL Systemhouse Inc. (acquired by MCI)	2/95	Cross	7, 6, 8
SoftKey International, Inc.	7/96	PServ, Educ	3
Software Maintenance Specialists	8/96	DMan, HS, Bank, Ins	8, 7, 6
Software Publishing Corporation	9/94	Cross	3
Spider Technologies, Inc.	8/96	Cross/INT	4
Sprint Corporation	9/96	Cross	2
Spyglass, Inc.	7/96	Cross/INT	4
Sterling Commerce, Inc.	4/96	Cross/EC, Bank	2, 3

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Sterling Software, Inc.	4/96	Cross, Fed, RSal Bank	6, 8, 4 3, 2
St. Paul Software	1/95	DMan, Dis	3
Subscriber Computing, Inc.	2/94	Tele	3
SunGard Data Systems, Inc.	4/96	Bank, Cross/DR	1, 3, 6
Supply Tech, Inc.	7/96	Cross/EC	4
Sybase	5/95	Cross	4, 6
System Software Associates, Inc.	9/96	DMan, Dis	3
Systems & Computer Technology Corporation	2/96	Educ, St, Loc, Fed, Man, Dis	8, 3
Technalysis Corporation See: Compuware Corporation			
Technology Solutions Company (TSC)	10/95	Dis, DMan, PMan, Bank, Ins, HS	7
Terrano Corporation (name change to Dynamic Healthcare Technologies, Inc.)	5/94	HS	5
Tesseract Corporation	2/94	Cross/HR	3, 6
Thomson Financial Services	3/95	Cross/DB	2, 3
Thomson Professional Publishing	6/95	BServ	2
Timberline Software Corporation	5/94	BServ, Misc	3
Triad Systems Corporation	3/96	RDis	5
TuneUp.com, Inc.	9/96	Cross/INT	2, 4
Unisys Corporation	5/96	Bank, Gov, Tele, Trans, Man	6, 7, 8
U.S. Intelco Networks, Inc.	3/95	Tele	1
UUNET Technologies, Inc.	8/95	Cross/INT	2
Vanstar Corporation	3/96	Cross	8, 7, 5
VeriSign, Inc.	3/96	Cross	4, 6
Walker Interactive Systems, Inc.	8/96	Cross/AC/PA	3
West Publishing Company	8/95	BServ	2, 3
Wildfire Communications, Inc.	4/96	Cross/OS	3
Worldwide Chain Store Systems, Inc.	3/96	Man, Dis	3
Yahoo! Inc.	8/96	Cross/INT	2

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Vendor Profile

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December 1995

Action Technologies, Inc.

Chairman: Bill Welty
President & CEO: Terry R. McGowan
1301 Marina Village Parkway
Suite 100
Alameda, CA 94501
Phone: (510) 521-6190
Fax: (510) 769-0596

Status:	Private
Employees:	70+
Revenue:	$5,000,000 *
Fiscal Year End:	12/31/94

** INPUT estimate*

Company Description

Action Technologies, founded in 1983, provides workflow software for business process design, coordination and management. The company's current core product line, the ActionWorkflow System, was introduced in 1992.

In December 1995, Action Technologies announced availability of ActionWorkflow Metro, the first workflow solution available for the Internet.

Action Technologies is a founding member of the Workflow Management Coalition and a leader in establishing key open systems standards for the workflow market.

Action Technologies is privately held, with venture funding provided by Volpe, Welty and Co.; Olivetti, Inc.; and others.

Organization and Structure

Action Technologies is headquartered in Alameda (CA) and has offices in New York City, Chicago, Houston, and Washington, D.C.

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The company is organized into the following groups:

- Development
- Sales
- Consulting and Education Group
- Marketing
- Technical Support
- Finance/Administration

Key executives are listed below:

Action Technologies Key Executives

Name	Position
Bill Welty	Chairman
Terry McGowan	President and CEO
Ed Jameson	CFO
Raul Medina-Mora	SVP & Chief Scientist
Chuck Pendell	VP Sales
Rodrigo Flores	VP Product Management
Pablo Flores	VP Product Development
Sumi Shohara	VP Marketing
Bart MacLeod	VP Consulting

Source: Action Technologies

Company Strategy

Action builds open, client/server, LAN-based workflow solutions to drive processes for users working as individuals, in workgroups and across the enterprise.

- The ActionWorkflow product line provides a complete workflow solution from analysis to implementation.

- Action enables organizations to map their process, build applications to automate it and manage it on a day-to-day basis.

Action bases its ActionWorkflow product line on open architecture and industry standards and is designed to integrate with applications from other sources.

- The company offers out-of-the-box software for immediate deployment and use, as well as a standards-based architecture and tools for integration with existing applications.

- ActionWorkflow runs on leading operating platforms, including NT and OS/2, Lotus Notes groupware and SQL database applications.

Financials

INPUT estimates that Action Technologies' 1994 revenue was $5 million.

Market Financials

Action Technologies targets Fortune 1000 companies. The company has clients in a range of industries, including the banking and finance, automotive, software, advertising, utilities, manufacturing and legal industries and government.

Geographic Markets

The majority of Action Technologies' revenue is derived from the U.S. and the remainder from international sources, including Europe and the Asia/Pacific region.

Employees

As of December 1994, Action Technologies had approximately 65 employees. The company currently has approximately 70 employees.

Key Products and Services

The ActionWorkflow System is a family of workflow software based on an open, object-oriented, client/server architecture. ActionWorkflow integrates with popular document management, communications, imaging and other business applications and

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uses Lotus Notes and SQL databases, running in the background and providing cues via familiar user interfaces.

The complete ActionWorkflow System includes the following products:

- ActionWorkflow Analyst, a business process modeling and analysis tool
- AnalystWorkflow Builder, a design and development tool
- AnalystWorkflow Manager, a workflow management and administration engine

ActionWorkflow DocRoute, introduced in 1995, workflow enables document management applications and integrates with Saros' Document Manager, PC Docs' OPEN and Novell's SoftSolutions.

ActionWorkflow Metro, announced in December 1995, brings the core functionality of Action's workflow technology to the World Wide Web (WWW), allowing companies to use the Internet to coordinate enterprise business processes through any standard WWW browser product, including Netscape.

- ActionWorkflow Metro allows any standard WWW browser product to become a client for Action's work management services. The product includes one application and a set of five customizable application templates for customer service, sales and marketing, human resources, finance and accounting, and engineering applications.
- Each ActionWorkflow Metro user has a WWW-based dynamic interface called a WorkBox—a single screen updated in real time where users can view all work, status and updates to ongoing work.
- The software also includes document-publishing capabilities.
- Action Technologies provides two offerings with ActionWorkflow Metro—the Application Center, which provides customers with a set of workflow applications requiring minimal setup, and the Development Center, which gives customers license to build customized WWW workflow applications using Action's suite of development tools.

Pricing for the ActionWorkflow System ranges between $199 and $450 per seat, depending on the size of the deployment.

- The Analyst has a suggested retail price of $495.
- ActionWorkflow DocRoute is sold for $195 per user and $2,495 per server.
- Volume discounts are available.

Professional Services

In addition to its software products, Action provides consulting services and education offerings related to workflow automation.

Action's education group offers public as well as private on-site courses on both Notes and SQL development.

- A fundamentals course presents the basics of Action's methodology.
- A consulting course provides the tools and techniques for applying the methodology to business processes.
- Specialty customized courses are designed to meet the particular needs of organizations or departments.

Action's consulting group works closely with customers to provide process analysis, design, and improvement; systems analysis, development and implementation; and rapid prototyping.

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- Action consultants help clients create workflow maps that reduce wasted time and increase customer satisfaction, providing application specifications on both Notes and SQL platforms, and participating in the development and testing of applications.

- Serving as systems integrators, Action consultants apply their experience to integrating workflow with legacy systems and existing applications.

- Action consultants have expertise in areas such as procurement, help desk, sales force automation and customer service.

Clients

Action Technologies has more than 600 customers of its software worldwide. Sample clients include Young & Rubicam (an international advertising agency), Bankers Trust (New York), Microsoft, Saturn Motors, Macromedia, Pacific Bell, Nestle, Pacific Gas & Electric, USAA, Hoescht Celanese and Cemex (an international cement manufacturer).

Marketing and Sales

Action markets and sells its products through its direct sales force as well as through partnerships with independent software vendors (ISVs), systems integrators, value-added resellers, consultants and distributors in 25 countries worldwide.

Through its Business Partner Program, Action works with select integrators and consultants to develop the emerging market for workflow management systems.

- Action Business Partners include integrators who sell the full range of ActionWorkflow products and services as part of their own vertical applications or their customers' internal applications, as well as training and business consulting organizations that sell and provide training on Action products.

- Action provides its Business Partners with marketing support, including lead referrals, product collateral, co-promotion, press relations and other services.

Alliances/Partnerships

Action pursues and maintains strategic partnerships with a range of software application developers.

Under the *TeamAction* program introduced in 1994, Action works with select ISVs to jointly develop and market "workflow-enabled" applications.

- The program allows customers of TeamAction partners to protect their software investment with the addition of workflow technologies and business process management techniques to existing functional and departmental systems.

- Targeted ISVs include vendors of line-of-business (cross-industry) applications such as financial accounting, service and support, sales and marketing, human resources, document imaging, imaging systems and EDI.

- Current *TeamAction* members include Saros, PC Docs, Platinum Software, Verity, Great Plains Software, Sybase, PeopleSoft, LaserData and Novell/SoftSolutions.

Action Technologies is actively working with Microsoft to develop the MAPI Workflow Framework and has announced that the ActionWorkflow System will support MAPI, bringing its collaborative workflow to the Microsoft Exchange Server.

In October 1995, Action Technologies and Minolta's Business Products Group announced

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an agreement to integrate Action Technologies' workflow software products with Minolta's MI^3 MS3000 line of image and information management systems.

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Vendor Profile

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July 1996

Acxiom Corporation

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P.O. Box 2000
Conway, AR 72033-2000
Phone: (501) 336-1000
Fax: (501) 336-3913
Internet: http://www.acxiom.com

ACXIOM®

Status:	Public
Employees:	3,000 (7/96)
Revenue:	$269,902,000
Fiscal Year End:	3/31/96

Key Points

- Acxiom Corporation is a provider of data warehousing and mailing list processing services as well as data products, data integration services, decision support services, and outsourcing/facilities management services to major firms in the U.S. and the U.K.
- In April 1996, Acxiom acquired Direct Media/DMI, Inc.™ (DMI), a provider of list brokerage, management, and consulting services for business-to-business and consumer list owners and mailers.
- In April 1996, Acxiom acquired Pro CD, Inc.®, a publisher of reference software on CD ROM.
- In August 1995, Acxiom acquired DataQuick Information Systems® and DQ Investment Corporation (collectively referred to as DataQuick). DataQuick provides real property information to support a broad range of applications, including marketing, appraisal, real estate, banking, mortgage, and insurance.
- In July 1995, Acxiom purchased Generator Datamarketing Limited, a U.K.-based

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provider of data and database marketing software and processing services.

Company Description

Founded in 1969 as Demographics, Acxiom Corporation is a developer of large data center management software. The company's three core competencies are data integration management and delivery, software development, and network computing.

Acxiom provides a range of services to assist clients in direct marketing organizations with the marketing process. These serveices include planning and project design, list cleaning, list enhancement and production, database creation and management, fulfillment, and consumer response analysis.

In 1988, the company changed its name to Acxiom Corporation, and the following year expanded into outsourcing as a means of providing data processing functions both remotely and on-site. Acxiom's reputation, built on developing and maintaining marketing database information, is now being extended to business operations and general data center outsourcing services.

The company's outsourcing/facilities management and information management services are provided to traditional direct marketing companies as well as companies not in the direct marketing industry.

Organization and Structure

Acxiom is organized into industry-specific business units focusing on insurance, high-tech, direct marketing, seminars, telecommunications, finance, publishing, automotive, and retail markets.

Acxiom's business groups are comprised of Franchised Business Units (FBUs). Each FBU is comprised of self-directed High Performance Work Teams (HPWT). Support functions such as human resources and accounting are decentralized, enabling the FBUs to operate as small businesses.

Internal organization at Acxiom focuses on creating work teams to service the needs of specific projects. Technical and operational talent assigned to a project one week may not be in the same position the next week.

Acxiom's management structure consists of three levels: the president, the Executive Operating Team (EOT), and the Business Unit Executives (BUEs).

The EOT is Acxiom's senior level leadership group whose function is to:

- Create, communicate, and champion the company's vision, beliefs, and corporate goals
- Provide direction for Acxiom associate strategies and systems
- Recruit, train, and mentor Acxiom associates
- Drive innovation, change, and risk-taking throughout the company
- Set strategic priorities and allocate resources
- Create, define, and provide role models for Acxiom's culture
- Establish boundaries for the company, including markets, structure, investments, and technologies

Acxiom is headquartered in Conway (AR), with U.S. sales offices located in Charlotte (NC), Chicago (IL), Denver (CO), Fairway and Overland Park (KS), Grapevine (TX), Iselin (NJ), Marietta (GA), McLean and Rockford

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(VA), Menomonee Falls (WI), New York (NY), and Washington, D.C.

Data centers are located in Conway (AR), Carmel (NY), Chicago (IL), and the U.K.

U.K. corporate and customer services operations are located in London, and U.K. fulfillment services and data processing operations are located in Sunderland.

Acxiom's subsidiaries include:

- Acxiom Chicago Data Center, Inc.
- Acxiom Transportation Services, Inc.
- Acxiom U.K. Ltd.

Company Strategy

Acxiom's business strategy is to develop long-term partnerships with its clients for the joint development of decision support tools. Acxiom focuses on converting and managing customers' critical data into actionable information.

The company has been moving away from its traditional dependence on one-time or repeating projects with short life cycles. It believes that only through long-term contracts can customers realize the benefits an Acxiom relationship can provide through full-service functional or business operations outsourcing, and management of large volumes of customer information.

In recent years Acxiom began to focus on outsourcing services, as it is closely relates to the general focus of the company—dealing with large scale information resources.

Financials

Acxiom's fiscal 1996 revenue reached $269.9 million, a 30% increase over revenue of $202.4 million for fiscal 1995. Net income was $18.2 million in fiscal 1996, compared to $12.4 million in fiscal 1995. A five-year financial summary is shown on the following page.

Fiscal 1996 revenue growth was attributed to the following:

- Financial services revenue grew 51% as a result of 8% growth in credit card processing revenues and $20.8 million in revenue resulting from the acquisition of DataQuick Information Systems.

- Direct marketing revenue rose 61%, reflecting the $16 million increase in revenue from the Trans Union marketing services contract and a 26% growth in other direct marketing revenues.

- Insurance revenue increased 13%, including revenue growth from the Allstate Insurance Company data management agreement of 4%, to $55.8 million.

- Information and communication services increased 34% reflecting revenue from the outsourcing contract with The Polk company of $6.5 million, 6% growth in the Trans Union data center management agreement, to $23.6 million and 30% growth in the remaining industry group.

Research and development expenditures were approximately $6.4 million (2% of revenue) in fiscal 1996, $7.0 million (3% of revenue) in fiscal 1995, and $5.9 million (4% of revenue) in fiscal 1994.

In fiscal 1997, management expects revenue growth to exceed 40%, reaching $386 million to $390 million in total revenue.

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Acxiom Corporation
Five-Year Financial Summary
($ Millions, except per-share data)

	Fiscal Year				
Item	3/96	3/95	3/94	3/93	3/92
Revenue	$269.9	$202.4	$151.7	$115.8	$90.9
• Percent change from previous year	33%	33%	31%	27%	(6.9%)
Income before taxes	$29.4	$20.1	N/A	N/A	N/A
• Percent change from previous year	46%	N/A	N/A	N/A	N/A
Net income	$18.2	$12.4	$8.4	$6.2	$2.1
• Percent change from previous year	47%	48%	35%	195%	(44%)
Earnings per share (a)	$0.70	$0.54	$0.38	$0.30	$0.11
• Percent change from previous year	30%	42%	27%	172%	N/A%

(a) Per-share data restated to reflect two-for-one stock splits in fiscal years 1995 and 1993.

Revenue Analysis by Product/Service

Acxiom's fiscal 1996 source of revenue, by product line, was distributed as follows:

Data services	37%
Data warehouse/decision support services	18%
List processing services	20%
Outsourcing and facilities management	20%
Other	5%
	100%

Interim Results

Revenue for the three-month period ending June 30, 1996 reached nearly $94.0 million, an increase of 59% over revenue of $59.2 million for the same period the previous year.

Results for the quarter include the operations of Pro CD and Direct Media, which were acquired in April 1996. Excluding the effects of these companies, revenue increased 38% over the same period the previous year.

Revenue growth during the period was attributed to increases in the financial, insurance, information services, and direct marketing industry sectors. Revenue in the media/publishing industry sector was unchanged compared to the previous year.

Market Financials

Acxiom serves direct marketing organizations and marketing departments of large corporations in the U.S. and the U.K., including financial institutions, insurance companies, consumer credit organizations, seminar companies, catalogers, retailers, publishers, consumer goods manufacturers, membership and continuity associations, and advertising agencies.

The company also serves charities, list users (direct mailers and telemarketers), list owners

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(customers who generate and own their lists), and list managers and brokers (agents who manage lists and provide direct marketing consulting services).

A three-year source of revenue summary, by industry, is shown below:

Acxiom Corporation
Three-Year Source of Revenue Summary

	Fiscal Year		
Industry	3/96	3/95	3/94
- Financial Services	27%	24%	20%
- Direct Marketing	26%	22%	25%
- Insurance	25%	30%	16%
- Information and Communication Services	15%	16%	16%
- Media/Publishing	7%	8%	10%
- Other	----	----	13%
Total	100%	100%	100%

Geographic Markets

Approximately 93% of Acxiom's fiscal 1996 revenue was derived from the U.S., and the remaining 7% from the U.K.

A three year geographic source of revenue summary follows.

Acxiom Corporation
Three-Year Geographic Source of Revenue Summary
($ Millions)

	Fiscal Year					
	3/96		3/95		3/94	
Geographic Market	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
U.S.	$252.2	93%	$187.9	93%	$135.5	89%
U.K.	17.7	7%	14.5	7%	16.2	11%
Total	$269.9	100%	$202.4	100%	$151.7	100%

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Acquisitions

In the past 15 months, Acxiom has completed four acquisitions—two during fiscal 1996, and two during the first quarter of fiscal 1997. Together, these acquisitions are expected to contribute approximately $100 million to fiscal 1997 revenue.

In April 1996, Acxiom acquired Greenwich (CT)-based Direct Media/DMI, Inc. (DMI) for $25 million.

- DMI is the largest list management company in the U.S. and one of the largest list brokerage and consulting services to business-to-business and consumer list owners and mailers.
- This acquisition is expected to contribute approximately $40 million in annual revenue.
- Certain operations of Direct Media will be managed through Acxiom U.K.
- The acquisition was accounted for as a purchase.

In April 1996, Acxiom acquired Danvers (MA)-based Pro CD, Inc., a publisher of reference software and provider of telephone and mapping data on CD ROM.

- Approximately 60 percent of Pro CD's projected $28 million revenue for fiscal 1997 is expected to be from sales to small businesses.
- Acxiom issued approximately 1.7 million shares of common stock in exchange for all of the outstanding common stock and common stock options of ProCD.
- The transaction was accounted for as a pooling of interests.

In August 1995, Axiom acquired San Diego (CA)-based DataQuick Information Systems (formerly an "S" corporation) and DQ Investment Corporation (collectively referred to as DataQuick)

- DataQuick provides real property information to support a broad range of applications, including marketing, appraisal, real estate, banking, mortgage, and insurance.
- DataQuick had $20.3 million in revenue for the year ended December 31, 1994, and is expected to contribute approximately $25 million to revenue in fiscal 1997.
- DataQuick complements the demographic information Acxiom offers through its InfoBase product line, strengthening the company's ability to provide data to the insurance and financial industries, as well as providing the company with on-line presence.
- The acquisition was in the form of a merger of two wholly owned subsidiaries of the company into each of DataQuick Information Systems and DQ Investment Corporation.
- Acxiom exchanged 984,839 shares of common stock for all of the outstanding shares of DataQuick's capital stock.
- The transaction was accounted for as a pooling of interests.

In July 1995, Acxiom purchased Generator Datamarketing Limited, a provider of data and database marketing software and processing services.

- Generator had revenue of $3.1 million for the year ended December 31, 1994.

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- Generator, a U.K. company based in Herfordshire near London, was acquired for approximately $6.5 million.

- Included in the acquisition is the Rapidus™ product, a decision support software enabling users to easily extract information from large databases via desktop computers.

- The Generator operations will be managed through Acxiom U.K.

Employees

Acxiom had approximately 3,000 employees as of July 15, 1996.

Key Products and Services

Acxiom's core products and services have traditionally been the list processing and data warehouse services. In addition to the traditional business, Acxiom also offers services in outsourcing/facilities management, and information management, as well as InfoBase™ services, and U.K. promotional services.

Acxiom's core products and services fall in the following areas:

Data Warehouse/Decision Support Services—Incorporate the full spectrum of Acxiom's products and services to provide large-scale solutions for housing, integrating, and analyzing large volumes of data.

- RelationBase®—A relational-like data warehouse for segmentation analysis, promotional planning, initiation, tracking and analysis, and decision support.

- Prospecting and Marketing databases—Acxiom offers the following types of databases:

  - RelationBase data warehouses are used for segmentation analysis, promotional planning, initiation, tracking and analysis, and decision support.

  - Flat structure (non-relational) databases provide a marketing platform for selection, segmentation analysis, reporting, and tracking customer data.

- Decision support solutions—Use standard industry tools to provide clients with access to Acxiom data warehouses and/or client/server systems.

- Data integration services—Allow multiple files from different sources to be combined into a data warehouse. These services include reformatting, standardization, enhancement of name and address information, and identification and/or elimination of duplicates within the warehouse.

Direct Marketing/List Processing Services—Provide rapid, high volume list merge/purge and fulfillment services to assist in planning and production of direct marketing campaigns.

- List rental services (LOFS) provide segmentation and fulfillment of list orders. LOFS use a proprietary graphical user interface to provide consolidation of multiple sources of customer data, standardization of data across sources, cleansing, deduplicating, and householding of name and address data based on individual customer needs.

- Merge/purge services allow multiple lists from different sources to be combined into one mail file. Acxiom provides reformatting, standardization, enhances name and address information, and identifies and/or eliminates duplicates.

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Data Integration Services—Provide data integration services for system integrators and hardware and software vendors.

- Postal products/data hygiene services are designed to improve and enhance files to minimize postage and optimize deliverability. Services include standardizing addresses, assigning postal, geographic, and demographic codes, and identifying and correcting all changes of addresses. The services can also sort mail and prepare all reporting for mailings.
- Merge/purge services allow multiple lists from different sources to be combined into one mail file.
- Consulting and analytical services provide customized services for marketing analysis, with a focus on improving short term profitability on individual mailing and long term strategic marketing strength.

Data Products—Provide industry-specific data solutions for both real-time batch and on-line processing.

- Telephone White Pages (EDGE)—EDGE is a database of names and addresses scanned from the telephone white pages, which can be used and/or enhanced for marketing purposes.
- IBConsumer℠ InfoBase—Acxiom's flagship data product is a multi-sourced database of U.S. households available for database or list enhancement and analysis.
- IBBusiness InfoBase—A business-to-business data enhancement and analysis tool that provides demographic data.
- IBTeleSource®—A multi-sourced database of telephone numbers for name and address appending and reverse appending (both on-line and batch).
- Data acquisition/management—This service provides for the purchase, storage, and transfer of data acquired for customer specific application, and the management of data owner/vendor relationships.
- DataQuick information services products—A range of information products centered around real property information.
- On-line products are offered over the Internet or via EDI, EDT, and other electronically delivered services.

MarketGuide℠—A family of five Microsoft Windows-based access tools for data warehouses, databases, or LOFS. They enable the user to access his mainframe-based file, query it, move it, analyze it, and score it from the users' workstation. MarketGuide also includes mathematical and segmentation features.

Outsourcing/Facilities Management Services

Since 1989, Acxiom has been providing outsourcing/facilities management services, managing clients' data centers and/or providing information systems functions, both on-site at the clients' facilities and remotely from Acxiom's Conway data center.

Two of Acxiom's largest clients use these services:

- In August 1992, a data center management agreement was signed with Trans Union Corporation, one of the three largest credit bureaus in the U.S. The agreement provided for the management of Trans Union's data processing center in Chicago (IL) through Acxiom's subsidiary, Acxiom Chicago Data Center, Inc.

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In 1994 the agreement was extended to include the outsourcing of all of the data processing services for Trans Union's Marketing Services Division.

- In September 1992, through its subsidiary, Acxiom RM-Tools, Inc., Acxiom began managing the outside purchasing and internal processing of consumer data for Allstate Insurance Company, which had previously been handled by Allstate's 28 regional offices.

  Acxiom provides software systems and database management services for use in conjunction with new auto insurance policies. In addition, Allstate uses software systems developed by Acxiom to help evaluate auto policy renewals and to market various types of insurance to new and existing customers.

InfoBase Services

The InfoBase IBConsumer℠ database is comprised of household data owned by seven data contributors who permit InfoBase to access their data for the purpose of list enhancement, list analysis, segmentation modeling, and merge/purge screening. Data made available through InfoBase includes consumer names and addresses, as well as demographic information.

In addition to the IBConsumer database, InfoBase offers the IBBusiness℠ database comprised of data provided by American Business Information, Database America, TRW, and The Lead Sheet for use in direct marketing to businesses.

U.K. Promotional Services

In addition to the data processing services offered in the U.K., Acxiom also provides comprehensive promotional materials handling and fulfillment services to its U.K. customers.

- Services provided include promotional fulfillment, competition handling, in-bound telemarketing and response handling, lead monitoring, contract packing and mailing, and coupon redemption. Acxiom uses computerized tracking and monitoring systems to provide customers with current reports on the progress of their marketing campaigns.

- During fiscal 1995, the company mailed more than 10 million promotional items, and custom-handled more than 18 million pieces of direct mail for more than 30 U.K. clients.

Clients

Some of Acxiom's top customers include:

- AT&T Telecommunications, Inc.
- Allstate Insurance Company
- American Management Association
- Associates Financial Services Co., Inc.
- Australian Tourist Commission
- Automatic Data Processing
- Bell Atlantic Communications, Inc.
- Britannia Building Society
- Chevy Chase Federal Savings Bank
- Citibank, N.A.
- Dillard's
- First Union National Bank of N.C.
- GTE Corporation
- General Electric
- Guideposts Associates, Inc.
- Imperial Tobacco Limited
- Marketing Profiles
- Meredith Corporation
- NationsBank of Delaware, N.A.

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- Physicians Mutual insurance Co.
- Procter and Gamble
- Prudential Insurance Co.
- Signet Bank
- The Polk Company
- Trans Union Corporation
- U.S. West
- Union Fidelity Life Insurance Co.
- Wal-Mart
- Wells Fargo

During the past three fiscal years Acxiom had two customers that accounted for a significant portion of the company's revenue:

- Allstate accounted for 20.7% in fiscal 1996, 26.4% in fiscal 1995, and 12.6% in fiscal 1994.

- Trans Union accounted for 15.5%, 12.6%, and 13.6% in fiscal years 1996, 1995, and 1994, respectively.

Marketing and Sales

Acxiom markets it services and software products via a direct sales force.

Alliances

In May 1996, Acxiom joined Oracle's Business Alliance Programme in an agreement that combines Acxiom's data warehousing and decision support capabilities with Oracle's database and on-line analytical processing (OLAP) strengths.

In November 1995, Acxiom and The Polk Company, one of the nation's largest data compilation companies, completed a ten-year agreement for the management of Polk's data center operations in Taylor (MI). Management of the operation was transferred in May 1996 to Acxiom's Conway (AR) headquarters.

- Management expects the agreement to contribute $15-$16 million in initial annual revenue to Acxiom.

- This alliance provides Acxiom with significant automotive data resources.

- Acxiom and Polk are also investigating partnerships in marketing, product development, data acquisition, and international sales.

In June 1995, Acxiom entered into a multi-year strategic business alliance with the Claims Solutions Group of Automatic Data Processing (ADP).

- Under the terms of the partnership, ADP will outsource some of its data processing functions to Acxiom

- The two companies will also jointly providing a range of services, including systems integration, information management, and data warehousing to the property and casualty insurance industry.

Trans Union Corporation, a long-standing customer of Acxiom, has also turned to the company for the outsourcing of data processing services to be used by credit card issuers in marketing efforts.

- In 1994, Trans Union contracted with Acxiom for the outsourcing of all the data processing services for Trans Union's Marketing Services Division.

- This alliance provides Acxiom with significant financial data resources.

In October 1995, Acxiom and the Boston-based consulting firm Grant & Partners formed a joint venture called Acxiom/Exchange Marketing Services (AEMS).

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- This partnership combines Grant's methodology for helping customers maximize marketing dollars with Acxiom's data warehousing capabilities.

- This venture will provide Acxiom with access to customers it has so far be unable to reach.

- The joint venture will also develop decision-support software.

In September 1992, Acxiom and the Northbrook (IL)-based Allstate Insurance Co. formed an alliance with the goal of creating a new information product to improve risk management and the overall cost of data manipulation.

- The alliance was originally formed to develop a risk management tool for Allstate, in keeping with Acxiom's long-term strategy of forming long-term strategic partnerships with its clients.

- In June 1995, the partnership released RM-Tool, a package that combines data warehousing services and risk-assessment software, for other insurers that want to outsource data manipulation for risk management.

Competition

Acxiom faces competition in the following areas:

Traditional direct marketing industry services—Key competitors include Metromail and Harte Hanks.

Outsourcing/facilities management services and information management services—Key competitors include EDS and IBM.

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INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program

August 1997

Admiral Plc

15 Victoria Avenue
Camberley
Surrey GU15 3HP
U.K.
Tel: 01276 682268
Fax: 01276 691541
Internet: http://www.admiral.co.uk

Chairman:	Clay Brendish
Status:	Public
Employees:	1,776 (6/97)
Revenue:	£90,800,000 $53,027,200
Fiscal Year End:	12/31/96

Key Points

- Admiral Plc is a computer services company encompassing consultancy, training, systems development, and software.
- Admiral is continuing its globalization strategy by establishing companies in Malaysia, France, and Belgium.
- Major clients include Barclays Bank, Syntegra, the computing services arm of British Telecommunications, and The British Ministry of Defense.
- Major software products include Visual Works and Paradigm Plus.
- Admiral has recently merged and reorganized its products divisions with its customer services division, in order to address its poor performance.

Company Description

Founded in 1979, Admiral originally focused on the government and defense industries. It has since diversified into the financial and commercial sectors.

The majority of Admiral's revenue is derived from its consultancy and systems development divisions. Admiral has maintained consistent, profitable growth and has never experienced an earnings reversal. Between 1994 and 1996 it experienced revenue growth of more than 30% each year.

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Operations and Structure

Admiral's board of directors is headed by the executive chairman, Clay Brendish. Admiral is headquartered in Camberley (U.K.), with offices throughout the U.K., in Dublin (Ireland), Boulogne (France), Wemmel (Belgium), Australia, Singapore, and Malaysia.

Admiral has four operating companies in the U.K.:

- Admiral Computing Limited, providing information technology system development services and product integration
- Admiral Management Services Limited, Admiral's consultancy subsidiary
- Admiral Training, providing training development and delivery services
- Admiral Customer Solutions, Admiral's marketing, development, and software support division

The core companies of these four are Admiral Computing and Admiral Management Services.

Admiral also has the following subsidiaries:

- Decylog, Admiral's French subsidiary, provides a full range of information technology services and consulting services to major industrial companies in the aeronautics, defense electronics, energy, and telecommunications sectors in the French market.
- Delphy, Admiral's Belgian subsidiary, works alongside Admiral Computing.

Employees

As of June 30, 1997, Admiral had 1,776 employees worldwide, compared to 1,471 one year prior.

Company Strategy

Admiral's vision is "to build a fast-growing, highly professional international services company." It is planning further acquisitions in Europe (Scandinavia, Germany, and Holland) in 1998 in order to achieve this. Admiral sees itself as providing high-quality yet cost-effective business solutions.

Acquisitions/Divestitures

Acquisitions

Recent acquisitions made by Admiral include the following:

- In March 1996, Admiral acquired Ares S.A. of France and its subsidiaries, Decylog Sarl and Abaqus S.A., for £6.7 million.
  - Ares and its subsidiaries made a profit of £700,000 on revenue of £8.4 million in 1996.
  - Ares is a provider of client/server technology, network systems, and industrial applications.
- In June 1995, Admiral acquired Admiral Legal Systems Ltd (formerly Sumlock Legal Systems Ltd) for £200,000, buying out the remaining 49% share.
- In May 1995, Admiral acquired Delphy Consultants n.v. of Belgium for £5.4 million. Delphy is a provider of IT training services.

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Divestitures

In April 1995, Admiral sold its remaining 49% of Powersoft U.K. to Powersoft Corp, a U.S.-based software developer. Proceeds were £2.2 million. Powersoft Corp now has complete control over its U.K. subsidiary and intends to take advantage of the growing client/server and PC markets.

Financials

Admiral's 1996 revenue grew 39% to £90.8 million ($53.0 million) from £65.6 million ($42.2 million) in 1995. Net income rose 13% to £7.24 million ($4.2 million) from £6.39 million ($4.1 million) the previous year. A five-year financial summary is shown in Exhibit 1.

Sustained growth in revenue, profit, and earnings per share has been achieved despite losses through the company's software division. These losses were made good through reorganization and a merger with the Customer Services division.

Exhibit 1

Admiral Plc
Five-Year Financial Summary
(£ Millions, except per-share and -employee data)

Item	Fiscal Year				
	1996	1995	1994	1993	1992
Revenue (Pounds Sterling)	£90.8	£65.6	£49.5	£36.6	£30.9
Revenue ($U.S.)	$53.0	$42.2	$31.6	$23.2	$16.4
• Percent change from previous year	39%	32%	35%	18%	N/A
Income before taxes (Pounds Sterling)	£11.2	£9.8	£7.7	£4.6	£4.0
Income before taxes ($U.S.)	$6.5	$6.3	$4.9	$2.9	$2.1
• Percent change from previous year	14%	27%	68%	16%	N/A
Net income (Pounds Sterling)	£7.2	£6.4	£5.2	£3.1	N/A
Net income ($U.S.)	$4.2	$4.1	$3.3	$2.0	N/A
• Percent change from previous year	13%	24%	68%	N/A	N/A
Revenue per employee (£ Thousands)	63.2	60.5	58.2	55.3	N/A
Earnings per share (pence)	11.6	10.7	9.0	5.5	4.8
Earnings per share ($U.S.)	$0.07	$0.07	$0.06	$0.04	$0.03
• Percent change from previous year	8%	18%	64%	14%	N/A

Source: Admiral Plc

Dollar to pounds Sterling exchange rates are 0.584, 0.644, 0.639, 0.634, and 0.532 for 1996, '95, '94, '93, '92 respectively.

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Interim Results

Revenue for the six months ending June 30, 1997 reached £54.1 million (approximately $32 million), a 26% increase over the same period in 1996. Operating profit for the period rose 39% over the previous year, to £7.0 million (approximately $4.1 million).

Revenue Analysis by Service Mode

INPUT estimates that approximately 40% of Admiral's 1996 revenue was derived from systems development, 35% from consulting services, 20% from training, and 5% from software products.

Market Financials

Exhibit 2 provides a three-year source of revenue summary by market sector.

- The finance sector provided the largest source of revenue in 1996, with 37% of sales.
- As the company has diversified overseas, it has decreased its reliance on U.K. government contracts (down from 18% of total revenue in 1994 to 11% in 1996).
- An increasing proportion of business is coming from the industrial and commercial sectors.

Exhibit 2

Admiral Plc
Three-Year Worldwide Source of Revenue Summary by Industry Market

Industry Sector	Fiscal Year		
	1996	1995	1994
Finance	37%	39%	36%
Commercial	20%	18%	17%
Defense	18%	18%	17%
Industry	14%	11%	12%
Government	11%	14%	18%
Total	100%	100%	100%

Source: Admiral Plc

Geographic Markets

Exhibit 3 shows how the European markets have displaced U.K. markets as a percentage of total revenue. This trend is expected to continue, owing to further acquisitions, as noted earlier. Admiral's intention to continue expansion in Europe should result in sustained growth in these markets. However, Clay Brendish has ruled out the U.S. market as a target, in consideration of the competition and associated risks.

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Exhibit 3

Admiral Plc
Four-Year Geographic Source of Revenue Summary
(£ Millions)

Geographic Market	Fiscal Year							
	1996		1995		1994		1993	
	Revenue £M	Percent of Total	Revenue £M	Percent of Total	Revenue £M	Percent of Total	Revenue £M	Percent of Total
U.K.	£69.1	76%	£56.0	85%	£46.5	93%	£35.2	96%
Rest of Europe	17.8	20%	6.9	10%	0.4	1%	---	---
Rest of World	4.1	4%	3.2	5%	2.8	6%	1.5	4%
Total	£91.00	100%	£66.1	100%	£49.7	100%	£36.7	100%

Source: Admiral Plc

Key Products and Services

Admiral Management Services

This subsidiary provides integrated solutions in the areas of strategy, planning, resource management, and process improvement, as well as support and project management (P.M.), for blue-chip commercial and government clients. Admiral in fact practices the P.M. that it preaches when implementing its services.

Admiral offers services in:

- Business planning
- Organization review
- Value/benefits measurement
- Business process improvement
- IS/IT strategy
- Change management

In addition to program and project management, Admiral offers services in project review, audit, requirement capture and analysis, procurement, contract management, and acceptance testing. Specific areas of technical strength include communications and computer security, and quality improvement consultancy.

Admiral Computing

Admiral Computing is an international software development company whose specialty is the implementation of multi-tier client/server-based architectures. Admiral offers delivery covering the spectrum of mainframe, client/server, object, and Web technologies.

The company provides extra service for busy periods or where IT skills do not exist. Support can be through rapid application development or, more traditionally, through testing and implementation.

Admiral Training

This division provides different levels of bespoke training and business communication services as well as generic and tailored tutor-led courses to end users of IT applications.

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Training courses are offered in the following areas:

- Management development
- Personal development
- Managing IT in business
- PC applications
- Systems design
- Project management
- Mobile computing
- Application programming
- Internet/intranet

The company also provides simulation products (air traffic control) and performance support services.

Admiral Customer Solutions

Admiral Customer Solutions is the result of the recent merger of the customer services and software products divisions. It specializes in the development, marketing, and support of a range of application products for marketing, legal practice, and software development.

- MIND, Admiral's major product, is an advanced database marketing system that supports marketing initiatives ranging from conventional direct marketing to sophisticated event-driven marketing.
- LegalMIND, Admiral's information system for lawyers and professional staff, is a fully integrated legal practice management system for firms of all sizes.
- Admiral also provides a range of software development, maintenance, and testing tools.

A team of product experts also provides consultancy and support services through a program of continuous product development and upgrade.

Marketing and Sales

Admiral's services are sold directly through each particular division; Admiral's software products are sold through Admiral Customer Solutions.

Clients

Major clients in the following industry sectors include:

Finance

Barclays Bank—Establishment of foreign exchange automation and PC-based money management products

Defense

British Army—Provision of training centers and communication infrastructure

Commercial

Shell Malaysia—Provision of consultancy, forecasting, and management software systems in Malaysia and Australia

Safeway—Provision of marketing campaign management software

Industry

Volvo Cars Europe—Provision of production automation, planning, and tracking systems

Hoffman-La Roche—Provision of computer-based training courses

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Honda—Provision of computer-based training for sales and technical staff for launch of Honda Civic

Competition

Admiral's major competitors include Sema, Cap Gemini, Logica, and CMG.

INPUT Assessment

Admiral's strong financial performance commands respect within the IT service industry. It is producing excellent results in revenue and profitability, and showing strong growth prospects. Admiral consistently outperforms its previous years' results and is financially stable.

The company remains focused as a service business, encompassing a range of activities from software development to training and IT support. However, operations never spread far from its key areas of expertise; business risk is therefore minimized as mistakes in unfamiliar operations are avoided.

The company is risk-averse, and this attitude appears manifest in Admiral's long-term strategy. With the exception of the United States, Admiral will continue its globalization, but carefully and only through selective acquisition.

Although Admiral is a leading performer, there are several minor concerns:

- Losses have been reported in Admiral's software products divisions, which contribute some 5% to revenue. However, INPUT believes that the success of the resulting reorganization and merger in rectifying this problem will be apparent in early 1998.

- Delays in some of the Australian division projects and poor attendance at training courses in Singapore have produced worse-than-expected results for these divisions, although prestigious contracts have also been won in both areas.

- The PowerSoft divestiture generated a comfortable profit but has given a U.S. company entry to the U.K. market, where its client/server products are in competition with those of the underperforming Admiral products division. Despite Admiral claiming to be happy with the deal, the wisdom remains to be seen in allowing a competitor access to Admiral's high-end corporate client base.

The rumor is that Admiral intends to either diversify its software into customized products or perhaps sell off its software division after increasing its value through reorganization.

Future challenges for Admiral will involve strengthening its presence in overseas markets and ensuring long-term profitability for its products divisions in light of increasing competition.

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INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program

August 1997

Adobe Systems Incorporated

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Fax: (408) 536-6799
Internet: http://www.adobe.com

Adobe House, Mid New Cultins
Edinburgh EHll 4DU
Scotland, United Kingdom
Phone: +44 131 453 2211

Chairman & CEO:	John E. Warnock
President:	Charles M. Geschke
Status:	Public
Employees:	2,226 (11/96)
Revenue:	$786,683,000
Fiscal Year End:	11/29/96

Key Points

- Adobe Systems Incorporated (Adobe) develops and supports software products that enable people to express and use information across all print and electronic media.

- In June 1997, Adobe swept PC Expo product awards with top honors in ten categories. Many of Adobe's products, including Adobe Acrobat, Illustrator, PageMaker, PhotoShop, and Premiere, received top honors from publications such as PC World, Windows Magazine, Window Sources, and Web Techniques.

Company Description

Adobe, founded in 1982, develops, markets, and supports computer software products and technologies that enable users to gather, create, assemble, and deliver information electronically, and print around the world. The company licenses its technologies to major computer, printing, and publishing suppliers and markets a line of application software products and type products for authoring and editing visually rich communication materials.

Adobe was formed to develop and commercialize applications for its PostScript® page-description language, which is now accepted as the worldwide standard for printing electronic documents.

Adobe's flagship applications are Adobe PageMaker for page layout, Adobe Illustrator for design and illustration, Adobe

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All brand names and product names are acknowledged to be trademarks or registered trademarks of their owners.

PhotoShop™ for image editing, Adobe FrameMaker™ for complex document publishing, and Adobe Premiere for film editing, video, and multimedia desktop production.

The Adobe Acrobat® family of products provides tools for creating, distributing, and accessing visually rich documents across platforms and networking schemes. Acrobat is also establishing an open, universal standard for electronic publishing.

Operations and Structure

Adobe is headquartered in San Jose (CA), with primary manufacturing facilities located in Santa Clara (CA). Other domestic offices are located in Seattle (WA).

Adobe has international subsidiaries as follows:

- Adobe Systems Europe Ltd. is headquartered in Edinburgh (Scotland), with subsidiaries in France, Germany, Italy, the Netherlands, Spain, Sweden, and the U.K.
- Adobe Systems Co., Ltd. (also known as Adobe Systems Japan) is based in Tokyo.
- Adobe Systems Pty., Ltd. is headquartered in Sydney (Australia) and serves the Asia/Pacific, and Latin America markets.

Company key executives are listed in Exhibit 1.

Exhibit 1

Adobe Systems Incorporated Key Executives

Name	Title
John E. Warnock	Chairman & CEO
Charles M. Geschke	President
David B. Pratt	Executive VP & COO
Jack Bell	Executive VP, CFO, & CFA
Robert A. Roblin	Sr. VP, Corporate Marketing
Colleen M. Poudiot	VP, General Counsel & Secretary
Ross A. Bott	Sr. VP & General Manager
Derek J. Gray	Sr. VP & General Manager, Abode Systems Europe
Hachiro Kimura	President, Adobe Systems Japan

Source: Adobe Systems

Employees

The company currently has 2,525 employees worldwide, including 2,070 located in the U.S., 116 in Japan, 215 in Europe, and 124 in other international locations.

Company Strategy

During Adobe's first decade, its goal was to provide software to simplify the authoring and printing of visually rich documents. Today, the company's goal has grown to include the distribution and access of that information. The company's vision is now to give everyone the tools to create and use digital information.

Traditionally, Adobe's strategy has been to have proprietary technology and develop applications for it. However, Adobe's strategy has changed, and the company is currently establishing an open standard for electronic publishing with Acrobat. Recently, the company has announced an enhanced version of Acrobat that will enable companies to incorporate Acrobat technology into their software and services for Internet users.

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Adobe is maintaining its strategy of developing tightly integrated products with common features and functionality. The company is committed to offering cross-platform implementations of its application products, in an effort to give users maximum choice and compatibility. The company plans to continue to offer, develop, and expand on its Web-based authoring software.

In the next few years, Adobe plans to develop more powerful and creative capabilities to entice users of Windows 95 and Windows NT.

Acquisitions/Divestitures

Acquisitions

During 1996, 1995, and 1994, the company acquired six software companies, in separate transactions, for an aggregate consideration of approximately $54.3 million in cash, notes payable, and the assumption of certain liabilities.

Divestitures

In January 1996, Adobe spun off its prepress applications product business to a newly established company, Luminous Corporation.

- Luminous will continue to develop, market, and distribute Adobe's prepress application products.
- Adobe will retain a minority equity interest in Luminous and will maintain ownership of certain core technologies for Adobe prepress products.

Financials

Total fiscal 1996 revenue reached $786.6 million, a 3% increase over 1995 revenue of $762.3 million. Net income rose 64%, from $93.5 million in 1995 to $153.3 million in 1996. A five-year financial summary is shown in Exhibit 2.

Exhibit 2

Adobe Systems Incorporated
Five-Year Worldwide Financial Summary
($Millions except per-share and per-employee data)

Item	Fiscal Year				
	11/96	11/95	11/94	11/93	11/92
Revenue	$786.6	$762.3	$675.6	$580.1	$520.0
• Percent change from previous year	3%	13%	16%	12%	15%
Income before taxes	$244.8	$163.9	$52.9	$72.4	$90
• Percent change from previous year	49%	210%	(27%)	(20%)	(27%)
Net income	$153.3	$93.5	$15.3	$42.0	$57.7
• Percent change from previous year	64%	511%	(64%)	(27%)	(27%)
Revenue per employee	$353,407	$328,719	N/A	N/A	N/A
Earnings per share	$2.04	$1.26	$.22	$.62	$0.84
• Percent change from previous year	62%	473%	(65%)	(26%)	(28%)

Source: Adobe Systems

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Research and development expenditures were approximately $152.9 million (19% of revenue) in 1996, compared to $138.6 million (18% of revenue) in 1995 and $113.8 million (17% of revenue) in 1994.

Interim Results

Revenue for the six months ending May 31, 1997 reached $398 million, a 5% increase over $378.3 million for the same period in 1996. Net income for the period fell 22% from $71.4 million in 1995 to $55.7 million in 1996.

Revenue Analysis by Product/Service Mode

Approximately 75% of Adobe's fiscal 1996 revenue was derived from application products and 25% from licensing.

Marketing and Sales

Adobe provides software and type products to the corporate, government, commercial publishing, entertainment and multimedia, and education markets.

Geographic Markets

Including eliminations approximately 67% of Adobe's fiscal 1996 revenue was derived from the U.S., 17% from Europe, and 22% from Asia/Pacific.

Exhibit 3 displays a three-year geographic source of revenue summary, as reported by Adobe.

- The Americas operations include licensing revenue, which is recognized on a worldwide basis, in addition to revenue and results of operations in North America, South America, Mexico, and Latin America.
- European operations primarily include subsidiaries in the Netherlands, the U.K., France, Germany, and Sweden.
- Pacific Rim operations include subsidiaries in Japan and Australia.

Exhibit 3

Adobe Systems
Three-Year Geographic Source of Revenue Summary
($ Millions)

Geographic Market	Fiscal Year					
	11/96		11/95		11/95	
	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
North America	$526.3	67%	$533.3	70%	$494.5	73%
Europe	134.9	17%	134.0	18%	124.3	18%
Asia/Pacific	176.5	22%	107.4	14%	72	11%
Eliminations	(51.1)	(6%)	(12.3)	(2%)	(15.2)	(2%)
Total	$786.6	100%	$762.3	100%	$675.6	100%

Source: Adobe Systems

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Key Products and Services

Adobe's products are based on the PostScript language, which serves as the foundation for a family of products used to created, view, exchange, and print documents on a wide range of systems. Adobe attempts to provide comparable feature sets in the Windows, Macintosh, and UNIX environments, and to increase cross-product compatibility and extendibility.

Adobe's application and printing and systems products are shown in Exhibit 4 on the following page.

Customer Support and Education

Support services provided by Adobe include telephone and on-line technical support and services.

Adobe CustomerFirst® provides complimentary and fee-based service options:

- Complimentary support—person-to-person support for registered Adobe products, offered for a period of time that begins with the first call
  - The length of the complimentary support period depends on whether the product is a first-time purchase or an upgrade, and whether the product is classified as Level I or Level II.
  - For first-time purchases of an Adobe product, Level I products receive support for one incident; Level II products receive 90 days of support.
  - For product upgrade purchases, Level I products receive support for one incident; Level II products receive 30 days of support.
- Free automated support—24-hour-a-day automated technical information accessed by e-mail, fax, modem, on-line service, or the Internet
- Pay-As-You-Go support—provided by technical specialists
  - 900-number access charges the user's phone bill at a rate of $2 per minute for Windows and Macintosh products, and $3 per minute for UNIX products.
  - Flat-fee-per-incident charges are charged to the user's credit card at the rate of $25 per incident for Windows or Macintosh products, and $40 per incident for UNIX products.
- Alliance Annual Support programs—annual agreements for individuals and workgroups providing one year of priority, toll-free assistance for all Adobe products
- Adobe also has a bimonthly publication called the *Adobe Magazine* and a series of how-to books published by the Adobe Press.

Adobe Customer Service provides sales and service issue support via phone, fax, or mail.

- Adobe prepares and authorizes independent trainers to teach Adobe software classes, sponsors workshops led by its own graphics staff, interacts with independent user groups, and conducts seeding and testing programs.

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Exhibit 4
Adobe Systems Products

Product	Description
Internet Publishing Products	
- Adobe Pagemill™	Allows the individual to create pages for the WWW.
- Adobe SiteMill®	An efficient and intuitive way to manage Web sites.
- Adobe Acrobat®	Universal creation, distribution, and viewing tool for portable electronic documents. Allows everyone on intranet to share business information, etc. Adobe Acrobat 3.0 contains components of previous Acrobat products, such as Acrobat Exchange™, Acrobat Distiller™, Acrobat Catalog™, and PDF Writer.
- Adobe Acrobat Capture™	Document imaging for converting printed "legacy" documents into PDF files.
Graphics & Layout Products	
- Adobe Illustrator™	Software that enables the user to design for multimedia, printing, and the WWW. Create artwork, layouts for packages, brochures, ads, Web pages, and more.
- Adobe Streamline™	Software that allows the user to scan any sketch and have it converted to editable line art.
- Adobe Dimensions®	Used to create three-dimensional design.
- Adobe PhotoShop™	Photo design and production software for prepress, publishing, graphics, and photography professionals.
- Adobe PageMaker™	Leading professional page layout software for documents with varied graphics content. Includes color, page design, printing, and compatibility features.
Technical Publishing Products	
- Adobe FrameMaker	Allows the user to write, design, and electronically distribute an important document by assembling text and images from everyone in a workgroup. Combines word processing, page layout, graphics, color features, and on-line distribution capabilities.
- Adobe FrameMaker+SGML™	Integrates SGML authoring and publishing tools.
- Adobe FrameViewer®	For electronic display of Adobe FrameMaker documents.
- Adobe FrameViewer RetrievalTool	Available as an add-on to Adobe FrameMaker and FrameViewer, it offers users powerful cross-document, full-text search capabilities with large document collections.
Video and Multimedia Products	
- Adobe Persuasion®	For producing and managing slide, overhead, and on-screen presentations.
- Adobe Premiere™	Software for editing film, video, and multimedia productions on the desktop.
- Adobe After Effects™	Lets one produce professional-quality composites, smooth 2-D animations and elaborate special effects.
Consumer Products	
- Adobe PhotoDeluxe™	For enhancing and personalizing photos.

Exhibit 4 (cont.)

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Exhibit 4 (cont.)

Adobe Systems Products (cont.)

Product	Description
Type Products	
- Adobe Type Manager Deluxe®	Allows clean text on screen and in print, by smoothing out the jagged edges and improving the print quality. Makes managing all Type 1 and TrueType 1 font easy.
- Adobe Type Reunion Deluxe	Allows complete control of the font menu.
- Adobe Type On Call	Allows the consumer to buy typefaces from the Adobe Type Library.
- Adobe Font Folio	The complete Adobe Type Library of over 2,100 typefaces, ready to use.
- Adobe Type Basics	A set of over 65 popular typefaces.
Printing and System Products	
- Adobe PostScript	Imaging language that delivers quality output, cross-platform compatibility, and top performance for printing devices.
- Adobe PrintGear	High-quality printing for small office/home and workgroup environments.
- Adobe Supra	Integrates Adobe PostScript and the Portable Document Format (PDF) for high-performance prepress and production printing environments.

Source: Adobe Systems

Marketing and Sales

Adobe markets and distributes its products through its direct sales force as well as through retailers, systems integrators, software developers, VARs, OEMs, and hardware bundle customers.

Adobe's international subsidiaries, Adobe Systems Europe Ltd. and Adobe Systems Co., Ltd., provide support for the company's worldwide distribution network and end-user customers.

Applications products are marketed through retail and distribution channels; however, they are becoming more widely distributed through VARs and systems integrators.

Printing and systems products are licensed and distributed through OEM customers.

Adobe has more than 6,000 resellers in the U.S. and Canada, and more than 300 distributors throughout Europe and the Pacific Rim.

Clients

A sampling of Adobe's clients, by market, include:

Corporate—First Call Corporation, Florida Power & Light Company, Clement Mok Designs, and Tandem Computers, Inc.

Government—Internal Revenue Service, the Centers for Disease Control and Prevention, the Department of Defense, and the Department of the Navy

Professional Publishing—Bennett Peji Design, Knight-Ridder Tribune Graphics Network, Medical Economics Company, Der Spiegel (German newsweekly), Bosch & Keuning (Dutch printing and publishing group), and Icônes (French magazine)

Entertainment and Multimedia—Dream Quest Images, Schock Entertainment of New York, and WIVB TV (NY)

Education—The Wharton School of the University of Pennsylvania, Virginia Tech's Department of Chemical Engineering,

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Cornwall High School (NY), and the Royal College of Art (London)

Alliances

Adobe has developed alliances with various companies, including AT&T Corp., IBM Corp., Xerox Corp., and Netscape Communications Corp.

- Adobe is a partner in the Adobe Press, a joint venture with Macmillan Computer Publishing that publishes how-to books.

- In June 1997, Adobe and HAHT Software collaborated on integrating the Adobe Acrobat 3.0 forms technology with HAHTsite. This will give developers the capability to create dynamic and visually rich, mission-critical Web applications with high-quality forms-based interfaces in the Portable Document Format.

- Also in June 1997, Adobe announced a seamless intranet publishing solution developed through a joint effort with Hewlett-Packard and Microsoft. This will be the industry's first one-step scan-to-Web system that will deliver scanned documents directly to commercial intranets and the Internet.

- In April 1997, Adobe entered into a relationship with Microsoft to develop Adobe's PostScript driver. This driver ensures the broadest available printing compatibility for Windows NT. The single Adobe PostScript driver will provide Windows NT users with access to the highest quality PostScript printer driver, ensuring digital content prints reliably and fast.

- In February 1997, Adobe announced that it was working closely with Storm Technology in an effort to find better solutions for digital imaging.

- Also in February 1997, Adobe announced that its software would be included with Minolta's new Dimage V digital cameras and with Konica's Q-EZ digital cameras.

- In May 1996, Adobe and AT&T announced an agreement to provide AT&T's WorldNet℠ Service customers with personal publishing capabilities on the WWW. Under the agreement, AT&T will license and distribute Adobe products for AT&T's value-added Internet access service.

- In May 1996, Adobe and Microsoft announced a collaborative effort to provide a new universal font format called OpenType™, which will combine the leading TrueType® and Type 1 font technologies of Adobe.

Competition

Adobe's competitors are as follows:

Printing and System Products

Adobe PostScript and PrintGear software face competition form Hewlett-Packard's LaserJet product family and from PostScript language clone developers, including Xionics and Harlequin.

Application Products

Desktop publishing—Interleaf Inc., Serif's Page Plus, and Microsoft's Publisher

PageMaker Windows version—Software from Venture Publisher and Quark Inc.'s QuarkXPress for Windows

PageMaker Macintosh version—Quark Inc.'s QuarkXPress

FrameMaker for Windows and Macintosh—Software from Venture Publisher and Quark Inc.'s QuarkXPress for Windows

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FrameMaker in the UNIX environment—Interleaf for technical publishing and WordPerfect and Applix for nontechnical publishing

Illustrator for Windows and Macintosh—Macromedia's Freehand, CorelDraw, and Deneba Canvas

PhotoShop—Micrografx Picture Publisher and Fractal Design Painter X2

Video editing: Premiere for Windows and Macintosh—VideoStudio from U-Lead, Digital Video Producer from Asymetrix, MediaMerge from ATI, Razor from In:sync, and VideoShop from Avid

Special effects: After Effects—Software from Parallax and Discreet Logic, and dedicated hardware from Quantel

Business presentations: Persuasion for Windows and Macintosh—Microsoft's PowerPoint, Software Publishing's Harvard Graphics for Windows, and Lotus' Freelance Graphics for Windows

Internet publishing: PageMill and SiteMill—Front Page for Windows from Vermeer Technologies (acquired by Microsoft Corporation in January 1996), MaviPress from Navisoft (a division of America Online), and Netscape Navigator Gold and LiveWire from Netscape

Electronic document communication: Acrobat—Common Ground from Hummingbird, Replica from Farallon, and Envoy, recently sold to Corel by Novell

Printing and Systems

PostScript interpreter—Hewlett-Packard's LaserJet product family

Display PostScript system—QuickDraw in Macintosh, GDI in Windows, and GPI in OS/2

PostScript language clone developers, including Xionics and Harlequin

INPUT Assessment

Adobe's strengths include:

- Market-leading products for content creation, print publishing, and the Internet
- Technology and market leadership in printing—from small office/home office to high end, including new solutions for Internet printing
- Excellent products, which are becoming more and more user friendly

The major challenge faced by the company is the increasing competition from various companies as the market expands.

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INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

March 1996

ADP Financial Services

CEO: Joseph B. Pirret
175 Jackson Plaza
Ann Arbor, MI 48106
Phone: (313) 769-6800
Fax: (313) 995-9136

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Status: Operating Unit
Parent: Automatic Data Processing, Inc.
Employees: 125 (1/96)

Key Points

- In February 1994, Automatic Data Processing (ADP) acquired Advantage Systems, Inc.
- Advantage's operations were merged with ADP's Financial Services business unit. Both organizations have a focus on the electronic banking market, selling primarily to the top 300 financial institutions offering cash management services.
- The ADP Financial Services division offers one-stop shopping for financial institutions that wish to deliver wholesale electronic banking applications to customers ranging from small businesses to large corporations.
- FORTExpress was announced January 4, 1995. This service offers the FORTE software product on an outsourcing basis.
- FORTE for Windows Version 2.2 was released in October 1995.
- The company plans to deliver an Internet product in mid-1996.

Company Description

ADP Financial Services provides electronic banking software and outsourcing services in partnership with more than 200 financial institutions.

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ADP Financial Services is a business unit of ADP, the leading provider of payroll processing services.

Mission Statement

ADP Financial Services is dedicated to delivering a range of services supporting both outsourced and in-house operations. Its strategy is to establish long-term partnerships with its clients and to develop, support, and enhance flexible, reliable products that allow clients to leverage their individual strengths.

Company Strategy

ADP Financial Services' strategy is to provide software solutions and services to financial services institutions and corporations for payments, collections and related services.

The company targets regional and money center commercial banks and corporations that need to secure access to information and transaction initiation.

Organization and Structure

ADP Financial Services is a separate operating group that reports directly to ADP's Treasurer, Joseph Pirret.

ADP Financial Services' main facilities are in Ann Arbor (MI) and Waltham (MA).

Market Financials

One hundred percent of ADP Financial Services' revenue is derived from the financial services industry.

Approximately 30% of revenue is derived from software products and 70% from outsourcing services.

Geographic Markets

The majority of ADP Financial Services' revenue is derived from North America. The unit also derives revenue from Europe, South America, and Australia.

Acquisitions

In February 1994, ADP acquired Advantage Systems, Inc. of Waltham (MA).

- Advantage Systems, founded in 1982, provided wholesale electronic banking software products, network services and consulting professional services to the financial services industry. Its key product was the FORTE Financial Services System for cash management.

- Advantage Systems was privately held and had approximately 65 employees at the time of the acquisition.

Employees

ADP Financial Services has approximately 125 employees, segmented as follows:

Marketing	5
Sales	10
Customer service	22
Technical support	8
End-user support	10
Voice Center	28
Research and development	35
Administrative	7
	125

Key Products and Services

FORTExpress and FORTE for Windows allow banks to deliver a range of cash management services.

- Services include:

  - Monitoring of account balances

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- Making payments and transferring money
- Verifying whether transactions have been processed
- Stopping payments on checks
- Concentrating funds from regional offices or locations
- Checking current investment rates
- Interfacing with other bank systems on-line
- Receiving other current financial information

- FORTE runs on fully fault-tolerant Stratus minicomputers.
- FORTE is currently used by more than 70 banks worldwide to provide services to more than 35,000 corporations.

FORTExpress offers access to FORTE software on an outsourcing basis.

CashExpress is the selective outsourcing of specific cash management services, including:

- Data Interchange (multibank reporting)
- Cash concentration
- MIS reporting
- Voice Center data collection
- Networking (via VAN services)
- Touchtone services

Marketing and Sales

ADP Financial Services' strategy is to provide high-quality software and outsourcing services through close partnership with its customers.

The company sells its products and services through its direct sales force. Sales offices are located in Waltham (MA), Chicago (IL), Ann Arbor (MI), and Dallas (TX).

Competitors

ADP Financial Services' primary competitors include Checkfree, National Data Corporation, and Harbinger.

Parent Company

Automatic Data Processing, Inc.
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ADVANCED SYSTEMS FOR CELLULAR, INC.
4521 Campus Drive
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Irvine, CA 92715
(714) 852-0714

Karen Huber, President
Subsidiary of Nationwide Cellular Service, Inc.
Total Employees: 30 (5/90)
Total Revenue, Fiscal Year End 12/31/89: $2,500,000*

*INPUT estimate

The Company

Advanced Systems for Cellular, Inc. (ASC), founded in 1984, develops, markets, and supports application software products and processing services primarily for the cellular telephone industry.

phone number changed 800 627-2355

In November 1989, Nationwide Cellular Service, Inc. of New York acquired an 80% stock interest in ASC for 52,000 shares of Nationwide common stock.

- Nationwide, a public company with about 350 employees and 1989 revenue of $72.6 million, is a reseller of cellular telephone services and also provides cellular telephone equipment and accessories.

- ASC had approximately 23 employees at the time of the acquisition. ASC now operates as a majority owned subsidiary of Nationwide and has about 30 employees.

Key Products and Services

One hundred percent of ASC's revenue is derived from sales and support of the company's Pro/Cell™ Billing and Customer Service System.

Pro/Cell is an integrated management information system that runs on most hardware that supports a standard ANSI COBOL compiler, including AT&T, NCR, and Unisys systems running UNIX.

- Pro/Cell modules include Lead Tracking, Customer Order Entry, Call Processing, Customer Billing, Accounts Receivable, and Collections.

- Pro/Cell options include incorporation of the CIBER record as an integral part of the internal billing data base and roamer billing function; support of switch polling for real-time retrieval, processing, and rating of all messages; and switch interfacing for

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on-line phone number activations.

- Clients may license the software to run on a timesharing basis through ASC service bureaus in New York and Irvine, or may purchase the software to run on their in-house computer.

- There are currently 10 clients that have Pro/Cell installed in-house and 3 clients that use Pro/Cell on a processing service basis.

Industry Markets

One hundred percent of the company's revenue is derived from cellular carriers and resellers.

Geographic Markets

Approximately 80% of ASC's 1989 revenue was derived from the U.S. and 20% from Mexico and Latin America.

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ADVANTAGE SYSTEMS, INC.

950 Winter Street
Suite 2100
Waltham, MA 02154
Phone: (617) 890-2400
Fax: (617) 890-5082

President:	Joseph H. Bayne, Jr.
Status:	Private Corporation
Total Employees:	65 (8/93)
Total Revenue:	$6,000,000*
Fiscal Year End:	4/30/93

* INPUT estimate

Key Points

- Advantage is delivering a new graphical front-end to its FORTE cash management system. This Windows-based system is based on client/server architecture and was developed with some of the latest tools.

- Advantage announced a strategic marketing deal with ADP Financial Services, Inc. whereby the two former competitors will cooperate to sell Advantage's FORTE and ADP's Voice Operator, Data Interchange, and AUTONET network services. This strategic relationship will allow financial institutions to select a wider range and integrated services for their corporate cash management customers.

- In March 1993, Advantage sold all rights and interest in it's Netpay financial EDI software to IBM. This was a natural extension of the relationship established in 1991 that gave IBM exclusive marketing rights for the MVS version of Netpay.

- Advantage has announced the availability of Secure Exchange. This software allows a bank's customer to encrypt and authenticate any file of payment transactions, EDI files, and ACH files.

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Company Description

Advantage Systems, Inc. provides wholesale electronic banking software products, network services, and consulting professional services to the financial services industry.

Advantage Systems is privately held and was founded in 1982. The company's principals and key employees have been working together for more than 20 years developing, marketing, and supporting wholesale electronic banking systems for money center and regional banks.

Operations/ Structure

Advantage Systems is headquartered in Waltham (MA) and has a consulting/development office in Chicago (IL).

Financials

INPUT estimates Advantage Systems' fiscal 1993 revenue was $6 million, up from fiscal 1992.

Industry Markets

Virtually 100% of Advantage Systems' fiscal 1993 revenue was derived from the financial services industry.

The target market for Advantage Systems' FORTE-related products and services is banks with assets of approximately $1 billion and above.

For the security software, the target markets include any corporation requiring secure payment transactions, banks, and VAR software firms.

Geographic Markets

Approximately 90% of Advantage Systems' fiscal 1993 revenue was derived from North America, with the remainder from international sources, including Europe, South America, and Asia.

Employees

As of August 1993, Advantage Systems had 65 employees, segmented as follows:

Marketing	4
Sales	3
Customer service	12
Technical support	5
Research and development	34
Administrative	7
	65

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Strategy

Advantage Systems' strategy is to provide software solutions and services to financial services institutions and corporations for payments, collections, and related services.

The company targets regional and money center commercial banks and corporations looking to secure their transactions and information.

Acquisitions/ Divestitures

In March 1993, Advantage Systems sold all rights for the Netpay financial EDI software product to IBM. Netpay was originally acquired by Advantage in 1991 with the acquisition of Interchange Systems, Inc. of Lexington (MA).

Key Products and Services

Approximately 60% of Advantage's current revenue is derived from software product licenses and support services, 30% from consulting, and 10% from other sources.

Advantage's FORTE Financial Services System, introduced in 1983, enables banks to deliver a range of cash management services to their corporate customers.

- Using FORTE, corporate treasurers can:
  - Monitor their account balances
  - Verify whether transactions have been processed
  - Make payments and transfer money
  - Stop payments on checks
  - Concentrate funds from regional offices or locations
  - Check current investment rates
  - Interface with other bank systems on-line
  - Receive other current financial information
- FORTE runs on fully fault-tolerant IBM System/88 and Stratus minicomputers.
- FORTE is currently used by more than 70 banks worldwide to provide services to over 25,000 corporations.
- Global File Transfer (GFX) is an Advantage communications product that operates in conjunction with FORTE or as a standalone product. GFX supports fully automated, computer-to-computer exchange of financial information.

Through marketing agreements with ADP Financial Services and CompuServe, Advantage Systems provides a value-added network that

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offers access to the FORTE cash management system and related services.

Secure Exchange is a software product to help corporations protect transmission of payment and other data files.

- Secure Exchange runs on IBM and compatible PCs and mainframe platforms.
- Features include encryption and authentication of any files to ensure they are protected and automated key exchange to minimize risks and costs.
- Secure Exchange is currently installed at over 20 banks and Fortune 500 corporations.

Advantage's Consulting Services Group provides technical services and consulting assistance to financial services companies. This group has particular expertise in on-line transaction processing applications and in communications products.

- Advantage assists clients interested in enhancing the company's standard software with additional capabilities or new products specifically designed for their needs.
- Consulting projects range from specification, design, and development to installation and conversion.

Marketing and Sales

Advantage Systems' strategy is to provide high quality software and services through a close partnership with its customers. The company provides "one stop shopping" for all aspects of corporate cash management.

The company sells its products and services through its direct sales force and through various alliances as described below.

Alliances

Advantage Systems has alliances with the following companies:

- Stratus Computer (as a STAR applications house)
- IBM (as a Business Partner)
- CompuServe (as a reseller of network services)

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- ADP Financial Services (as a marketer of their voice operator services, data interchange, and AUTONET value-added network services)

Clients

Advantage Systems' clients include Bank of America, Branch Banking & Trust, First Interstate Bancorp., NationsBank, and PNC Financial.

Competition

Advantage Systems' competitors include firms that sell cash management services via service bureaus (including National Data Corporation and BankLink) and companies that sell in-house cash management software (primarily DISC, Inc.).

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IT 2000

INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

June 1995

Advantis

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Chairman & CEO: Syd N. Heaton
President & COO: Gary R. Weis
231 North Martingale Road
Schaumburg, IL 60173

Marketing Headquarters
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Tampa, FL 33607
Phone: (813) 878-3000
Fax: (813) 878-5627

Status:	Joint Venture
Employees:	3,600 (6/95)
Revenue:	$1,350,000,000*
Fiscal Year End:	12/31/94

*INPUT estimate

Key Points

- Advantis, a networking technology partnership formed by IBM and Sears, is the U.S. provider of the IBM Global Network.
- In early 1995, IBM introduced leased-line access to the Internet by the IBM Global Network through Advantis. The announcement follows the December 1994 introduction of IBM's firewall products and World Wide Web hosting services.
- Advantis is a participant in CommerceNet, the first large-scale market trial of electronic commerce over the Internet.

Company Description

Advantis offers a full spectrum of networking technology solutions, including custom network solutions, network services and network applications services. Customers can use the resources of Advantis to extend the reach of their existing applications through the use of a

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variety of networking, messaging and computer services, while outsourcing all or part of their network installation and management. Advantis' services enable companies to do business electronically.

- Custom network solutions include total network outsourcing, design, operation and integration of SNA and multiprotocol networks and asynchronous transfer mode (ATM)-based multimedia networks.
- Network services offer leased line, dial or wireless connections that link businesses while addressing the needs of LAN internetworking for client/server computing.
- Messaging services enable companies to compete in the global electronic marketplace using services such as electronic mail and electronic data interchange (EDI).

Advantis was formed in December 1992 as a joint venture of IBM and Sears, Roebuck and Co. IBM's Integrated Systems Solutions Corporation (ISSC) holds the majority interest (70%) in Advantis.

- Advantis combined two of the world's largest information networks into one company, providing customers network access from 800 cities in 100 countries through IBM affiliates worldwide.
- Advantis merged the operations of IBM's Networking Systems (NSS), including IBM Information Network (IIN), IBM internal telecommunications and ISSC's custom networking organization and Sears Technology Services, Inc. (STS), including Sears Communications Company and the information systems professionals who support the Sears family of companies.

Advantis is the U.S. provider of the IBM Global Network.

- The IBM Global Network is made up of Advantis in the U.S., the IBM Information Network organization worldwide and wholly owned subsidiaries and joint ventures around the world providing value-added services.
- The IBM Global Network's portfolio of services are designed to meet customers' networking requirements for data, voice and video and include Internet access and services, network services, messaging services, support services, network outsourcing and information services.
- The IBM Global Network has more than 26,000 customer enterprises supporting more than 2 million users and access to networking services in 800 locations in nearly 100 countries.

Organization and Structure

Advantis' key executives are summarized below:

Advantis Key Executives

Name	Position
Syd N. Heaton	Chairman and CEO
Gary R. Weis	President and COO
Roger L. Dudley	VP Marketing and Sales
Jim B. Pickerill	VP Sales Operations and Planning
J.F. Skeen	VP Marketing, Partnership Accounts

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In addition to its corporate headquarters in Schaumburg (IL), Advantis has its marketing headquarters in Tampa (FL). Other U.S. offices are in Columbus (OH), Dallas (TX), White Plains (NY) and Boulder (CO).

International affiliates are headquartered in Ontario (Canada), Paris and Japan.

Advantis data centers are in Schaumburg (IL), Dallas (TX) and White Plains (NY). International Network Control Centers are in the Netherlands, Japan and the U.K.

Company Strategy

Advantis' strategic objective is to provide a range of services and support for electronic markets with extensive, any-to-any interconnection. The company plans to become the leader in networking technology. Primary targets include retail, state and local government, health care, insurance, manufacturing and transportation.

Financials

INPUT estimates Advantis' 1994 revenue was $1.35 billion, of which approximately 60% was derived from noncaptive (non-IBM/Sears) customers.

Advantis' network services business grew at more than twice the industry average during 1994, 1993 and 1992.

Revenue Analysis by Product/Service

INPUT estimates approximately 50% of Advantis' revenue is derived from network services (network, messaging and information services), 20% from processing services (capacity services), 20% from outsourcing (systems/network management) and the remaining 10% from professional services consulting and network design.

Market Financials

Advantis clients come from a range of industries, with a concentration in the healthcare, insurance, retail, manufacturing and government markets.

Geographic Markets

One hundred percent of Advantis' revenue is derived from the U.S.

Acquisitions

In November 1993, Advantis acquired the fiber network of San Francisco-based SP Telecom. In addition to nationwide transmission capacity, the acquisition provided Advantis with strategically located terminal equipment.

Employees

As of March 1995, Advantis had approximately 3,600 employees, up from 3,200 employees a year ago.

Key Products and Services

Advantis offers five categories of services:

- Advantis Custom Network Solutions
- Advantis Network Services
- Advantis Messaging Services
- Advantis Capacity Services
- Advantis Information Services

Advantis Custom Network Solutions

A custom network solution is tailored to the customer's specific networking requirements on a special request basis in response to customer requirements for the plan, design, implementation, integration operation and ongoing management of customer networks.

Custom Network Solutions provides outsourcing services for custom managed networks including reengineering, logical and physical network design, installation,

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operation and ongoing network management for data, voice and/or video networks.

Support options include integrated digital network exchange (IDNX) bandwidth management for integrated data and voice networks; multivendor/carrier management; multiple physical media, including terrestrial, fiber, satellite and wireless; SNA subarea and advanced peer-to-peer networking (APPN); TCP/IP; LAN internetworking; and integrating multiprotocol networks.

Network implementation services provide advice, guidance and hands-on assistance in telecommunications, including long- and short-range planning, integration and project management on a special-request basis.

Advantis currently has approximately 100 Custom Network Solutions clients. Current contracts include the following:

- A ten-year contract with Amtrak (through IBM ISSC) to provide network management and operations services. Under the $500 million agreement, IBM ISSC is providing Amtrak with a range of information technology services, including data center operations, disaster recovery services, voice and data network services, help desk, PC and LAN support, business reengineering consulting and equipment moves, adds and changes.

- A ten-year contract with Equifax (through IBM ISSC) to provide network and LAN management, operation, maintenance and support. Under the $650 million, contract, ISSC is providing Equifax with data center management, business recovery services and improved technology for the Equifax data center.

- A five-year, +$50 million contract with Comerica, Inc. to provide data and voice network services and operation.

- A ten-year, $320 million to $440 million contract with Jack Eckerd Corporation (through IBM ISSC) to provide WAN services and management.

- A ten-year, $3 billion contract with McDonnell Douglas Corporation (through IBM (ISSC) to provide voice and data communications, including LAN and WAN services.

- A three-year contract with First Interstate Bank to provide network operation and management, problem determination and design services for First Interstate Bank's network.

- A three-year contract with New Holland North America to provide network design and management for New Holland North America's integrated data and voice networks.

Advantis Network Services

Network Services can provide customers with all or part of their networking requirements, from value-added services based on leading networking technology.

- Customers can use Network Services to configure almost any network they require, including combinations of terminal-to-host, host-to-host, LAN-to-LAN, WAN-to-LAN and peer-to-peer connections. Single vendor or multivendor environments, within or between organizations, is supported internationally.

- Network Services provides state-of-the-art data communications facilities, 24-hour availability (except for minor

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scheduled network maintenance), protocol and line-speed conversions, network support using IBM NetView and other advanced network management tools, on-line problem reporting and tracking, user screens and selection menus and user support.

Two types of connections are available:

- Leased Line Services—dedicated facilities to the nearest Advantis network node
- Dial Services—switched connections that allow local access in most cities in the U.S. and in 100 countries around the world

Advantis Passport™ terminal emulation software offers high-performance 3270 device emulation that provides multisession communications for personal computer users.

Advantis manages a worldwide SNA backbone network and a high-speed multiprotocol network providing leased line access at speeds up to 1,544 mbps and dial access at line speeds of 300 to 28,800 bps.

- Worldwide network access is available in 800 cities in more than 50 countries and local public packet switched data networks (PSDNs) in more than 50 additional countries and locations, via an X.25 international gateway in Zoetermeer (the Netherlands). International access is provided through Advantis' affiliation with the IBM Global Network.
- Leased-line nodes are available in:
  - 100 cities in the U.S.
  - 13 cities in Canada
  - 157 cities in Europe
  - 74 cities in the Asia/Pacific
  - 7 cities in Latin America
- Dial access nodes are available in:
  - 376 cities in the U.S.
  - 19 cities in Canada
  - 168 cities in Europe
  - 74 cities in the Asia/Pacific
  - 7 cities in Latin America
- Additional access is provided via an "800" number service across the U.S., Puerto Rico and the Virgin Islands.
- Protocols supported include:
  - SNA/SDLC
  - X.25
  - Asynchronous
  - Bisynchronous
  - NetBIOS
  - Novell IPX
  - TCP/IP
  - APPN
- More than 450 devices have been tested and approved for network attachment, including:
  - IBM SNA networks and host computers
  - IBM AS/40 and System/3X computers
  - IBM PCs, PS/2s and PC LANs
  - IBM 3270 terminals and devices with 3270 emulation, including non-IBM hosts and midrange systems
  - X.25 processors
  - RJE workstations and devices with RJE emulators
  - A variety of non-IBM devices supported via X.25, SDLC, ASYNCH, BISYNCH

In early 1995, Advantis introduced two new LAN dial services for remote users—dial services for multiprotocol LAN

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communications and dial services for TCP/IP.

IBM Internet Connection services are designed to enhance interaction with the Internet and remove the complexities associated with this environment. The services are available for OS/2 and Windows environments.

Firewall Services, based on the same core technology as IBM's NetSP Secured Network Gateway, are designed for IBM Global Network customers. IGN Firewall Services reside between the IBM Global Network and the Internet and support both TCP/IP and SNA users by providing access to Internet resources, such as Telnet, Gopher and FTP, but does not let outside Internet users access to internal customer networks.

SE Support Services is a package available to customers for qualified Network Services leased line and dial accounts. These services include a headquarters focal point, leased line installation support services for dial customers and ongoing maintenance support.

Advantis Messaging Services

IBM Mail Exchange—Advantis' international electronic mail service—extends the reach of internal mail systems by providing connections to business partners, remote users and systems of all types.

- Customers can use a variety of IBM and non-IBM in-house systems to send messages to each other, or use mailbox services provided by IBM Mail Exchange.
- Service features include simplified addressing, format conversions, electronic trade and user directories and additional security at the user level.
- IBM Mail Exchange, either directly or via service provider agreements, can forward electronic mail messages to telex, FAX and postal destinations.
- IBM Mail Exchange provides connectivity between a range of host, midrange and other office systems, both IBM and non-IBM, including the OfficeVision family of products, Professional Office System (PROFS), Distributed Office Support System (DISOSS), Remote WinMail, Personal Services, Software Mall, the Internet and the Advantis EDI mailbox service.
- Advantis offers IBM Mail LAN Gateway/2 to assist users as they begin to integrate their LAN-based electronic mail platforms with their host-based E-mail systems.
  - IBM Mail LAN Gateway/2 allows the customer to communicate with several disparate mail platforms using one gateway that is resident on the LAN.
  - The IBM Mail LAN Gateway/2 allows customers to bridge existing SNADS or NJE-based electronic mail platforms like DISOSS, EMC2/TAO, OfficeVision/4000, PROFS, OfficeVision/VM and others to cc:Mail and Lotus Notes.
  - Using IBM Mail LAN Gateway/2 and IBM Mail Exchange, communications can be extended to outside trading partners worldwide or to divisions within the company that have not made an investment in the same host-based electronic mail systems.

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- IBM Mail Exchange also supports non-IBM and IBM office systems conforming to the X.400 messaging standard. X.400 office systems using X.25 can connect directly to an Advantis network node. Advantis is committed to international standards such as open systems interconnection (OSI) and its messaging components, including X.400 and the X.500 standard of directory services. Advantis currently participates in the North American Directory Forum with other electronic mail and directory providers with the express purpose of bringing an X.500 global directory to the marketplace.

- Advantis has commercial interconnections with AT&T Mail, AT&T Easylink, ATT Mail, BellSouth, BT UK, BT North America/MCI, EMBARC, GE Information Services, Helsinki Telephone Company, Infonet, JANET, Mercury Communications, PacBell, Norway PTT, Sprint, Stentor, Telecom Finland, Switzerland PTT, UK Sprint, US Sprint and the Netherlands PTT for exchanging mail using X.400.

Advantis EDI Services provides electronic interchange of business transactions in standard formats between trading partner applications.

- Advantis EDI translation and management software products include DataInterchange/MVS, DataInterchange/MVS-CICS, EDI/400, EDI/36, EDI/38, EDI/e and EDI/EDGE, each furnishing a complete standards dictionary and transaction set for multiple releases of ANSI X12 and UN/EDIFACT standards. Translation and management software can also be customized to support industry standards like UCS, VICS, TDCC and WINS.

- Advantis Data Exchange Services offer several components, including an international mailbox, EDI network services and ready-to-use software for customer systems and interfaces that manage communications with the mailbox.

  - Information Exchange is an international storage and retrieval networking service that uses an electronic mailbox for convenient and cost-effective data communications. The mailbox can be used to exchange virtually any kind of information, from an electronic mail message to a very large data file, between IBM and non-IBM processors, midrange systems, PCS and RJE workstations.

  - Customers can use Information Exchange for a variety of applications, from consolidating data from distributed locations to exchanging CAD drawings, electronic mail or system files between companies.

  - Data Exchange Services offers interfaces for MVS, VM, CICS, OS/2 and AIX operating systems and the IBM PC, IBM AS/400, IBM System/36 and RJE workstations. The service also supports the exchange of EDI data formatted to the ANSI X12, UN/EDIFACT, UNTDI and UCS standards.

- To aid in EDI implementation, Advantis offers professional services in strategic direction consulting, planning and design, implementation, skills transfer and education, and trading partner coordination.

- Using EDI VAN Interconnect, companies can exchange X12 or UCS data with

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trading partners using other EDI services networks. Current network interconnections include:

- ARI Network Services (Agridata)
- AT&T Mail
- ATT Mail
- Bell Atlantic
- BT North America/MCI
- GE Information Services
- GM/EDS
- Harbinger Computer Services
- Kleinschmidt
- Mediatel
- ORDERNET/Sterling Software
- TransSettlements, Inc.
- AT&T Easylink Services (Western Union)

SHOWBBS is Advantis' on-line interactive bulletin board offering that provides on-line, interactive access to a variety of information.

- SHOWBBS information is controlled by the bulletin board owner and is designed to meet the owner's requirements.

- In addition to the bulletin board services, users can send E-mail and EDI transactions to other users of Advantis Messaging Services.

- Software Mall, Advantis' on-line support facility, is an implementation of SHOWBBS.

Advantis Capacity Services

Advantis also offers a range of information systems services that provide IBM software and mainframe computing power on a variety of charging methods. These services are currently available only in the U.S. Customers can develop and test applications or run production on Advantis processors in either dedicated or shared multiple operating systems (VM and MVS) configurations.

- The Dedicated Processor Custom Offering provides a customized information system for companies that need computing resources but do not want to make a major capital investment in hardware.

  - Advantis provides the processor, DASD, tape and other system components and the operating system.

  - The dedicated processor is installed at an Advantis facility, System access is through the Advantis network. Advantis provides limited systems programming and operation support.

- SystemShare Custom Offering is a timesharing service that provides access to a range of VM/ESA and MVS/ESA software products—programming languages, coding aids, business-decision utilities, office and productivity tools. SystemShare can be used to develop and test new applications, reengineer old applications, provide backup, handle peak-load capacity requirements, provide departmental support and evaluate IBM products.

Advantis Information Services

The Advantis network offers U.S. customers access to more than 2,000 commercial databases, bulletin boards, electronic catalogs and industry-specific services via a single connection to the network. Leased line or dial connections can provide users with high-speed, full-screen access to services.

Information Services include access to IBMLink, IBM's electronic support facility; Software Mall, a collection of electronic stores operated and maintained by

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individual software vendors; and Remote Screen View Services Facility, a productivity tool that allows multiple users to view an application operated by another user.

A number of companies and industry associations are combining their resources with Advantis to create customized solutions serving all participants within an industry. Examples of industry solutions available include:

- Quick Response Service (QRS) for retailers
- IVANS, the largest shared network service in the insurance industry
- Corporate Alliance, a multicompany order-entry service for health care providers

Clients

More than 15,000 U.S. customers and more than 1.6 million user IDs are currently connected to the Advantis network.

Marketing and Sales

Advantis products and services are sold through its sales force and IBM's worldwide marketing and support organization.

Products and services are also marketed through a variety of business associate relationships.

Alliances

Advantis is a member of CommerceNet, a consortium of companies working together to define the future direction of Internet technology and electronic commerce.

Competitors

Advantis' primary VAN competitors include AT&T, GE Information Services, MCI (BT TYMNET) and Infonet.

Outsourcing competitors include AT&T and EDS.

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INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

March 1996

Affiliated Computer Services, Inc.

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President & COO: Jeffrey A. Rich
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Dallas, TX 75204
Phone: (214) 841-6111
Fax: (214) 828-4389
Internet: Http://www.acs-net.com

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Status:	Public
Employees:	4,600 (3/96)
Revenue:	$313,200,000
Fiscal Year End:	6/30/95

Key Points

- Affiliated Computer Services (ACS) provides outsourcing, transaction processing, image management and professional services to a range of clients nationwide.
- ACS entered the professional services market in January 1995 with its purchase of a 70% interest in The Systems Group, Inc., a professional services firm that provides consulting, programming, and technical support services.
- In March 1996, ACS acquired a majority stake in Unibase Technologies, giving ACS entry into the data management market.
- Bank of America, Texas, N.A., historically ACS' largest customer, migrated its processing operations to its parent company and did not renew its outsourcing contract with ACS that expired in August 1995. B of A Texas contributed approximately 11%, 14% and 15% to ACS' fiscal 1995, 1994 and 1993 revenue, respectively.

Company Description

ACS is a nationwide provider of a range of processing services, including outsourcing, electronic funds transfer (EFT) transaction processing, and image management services. The company also provides consulting,

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programming, and technical support professional services in selected regional markets.

ACS has purchased 19 information processing companies since its inception, which has resulted in geographic expansion, growth and diversification of the company's customer base, expansion of services offered, and increased economies of scale. Approximately 57% of the increase in revenue since 1988 has been attributed to these acquisitions.

In September 1994, ACS completed an initial public offering of 2.3 million shares of common stock, raising net proceeds of $32.2 million.

- ACS also initiated a restructuring in connection with the public offering, which included the spin-off of certain operations to its stockholders.

- The spin-off involved several subsidiaries whose operations included business forms distribution, real estate investment and brokerage, courier services, and various other lines of business unrelated to ACS' information services business. These discontinued operations contributed approximately $63.8 million and $50.2 million to ACS' total revenue in fiscal 1994 and fiscal 1993, respectively.

In March 1996, ACS announced a second offering of approximately 1.8 million shares of its common stock.

Organization and Structure

ACS organizes its services into the following areas:

- *Outsourcing (Commercial Services and Financial Services)*

- *EFT Transaction Processing*

- *Image Management Services*

- *Professional Services*

ACS subsidiaries include the following:

- ACS Merchant Services, Inc. was formed in September 1995 to market point-of-sale (POS) services to independent merchants, retail chains, and banks throughout the U.S.

- Dataplex Corporation, based in Jackson (MS), provides information and image capture, data storage protection, and retrieval services for more than 12,000 financial institutions, private businesses and government agencies.

- The Systems Group, Inc., based in Dallas with more than 350 employees, provides professional services consulting and programming.

Company Strategy

The key components of ACS' business strategy include the following:

- *Expand the customer base*—ACS seeks to develop long-term relationships with new customers, diversify its customer base across multiple industries and expand services offered to existing customers. The company's primary focus is on increasing its revenues per customer by adding large-volume transaction processing customers.

- *Provide flexible information processing solutions*—ACS offers custom-tailored information processing solutions using a range of proprietary and third-party licensed software on multiple hardware and systems software platforms.

- *Maximize economies of scale*—ACS' strategy is to develop and maintain a significant customer and account/transaction base to

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create sufficient economies of scale that enable ACS to achieve competitive unit processing costs.

- *Complete strategic acquisitions*—ACS' acquisition strategy is to acquire information processing companies that enable ACS to expand its geographic presence, to expand the products and services offered to existing customers and to obtain a presence in new, complementary markets.

- *Invest in technology*—ACS responds to technological advances and the rapid change in the requirements of its customers through the commitment of substantial amounts of its resources to the operation of multiple hardware platforms, customization of products and services that incorporate new technology on a timely basis, and the continuous training of customer service personnel.

- *Build recurring revenue*—ACS seeks to enter into long-term contracts with customers to provide services that meet their ongoing information processing needs. For fiscal 1995, approximately 95% of ACS' revenue from continuing operations was recurring.

Financials

ACS' fiscal 1995 revenue from continuing operations reached $313.2 million, a 15% increase over fiscal 1994 revenue of $271.1 million. Net income rose 43%, from $12.3 million in fiscal 1994 to $17.6 million in fiscal 1995.

- Approximately two-thirds of the revenue growth in fiscal 1995 was due primarily to internally generated sales growth, with the remainder (approximately $15.6 million) generated from acquisitions.

- Excluding revenue from B of A Texas, fiscal 1995 revenue increased almost 19% over fiscal 1994.

- In the five-year financial summary shown on the following page, revenues prior to fiscal 1995 have been restated to reflect continuing operations only and exclude the spun off operations previously described.

Revenue Analysis by Product/Service

Approximately 55% of ACS' fiscal 1995 revenue was derived from its outsourcing services, 42% from processing services (21% from EFT transaction processing and 21% from image management services) and the remaining 3% from professional services.

- Outsourcing revenues increased 14% during fiscal 1995 due to an increase in the accounts processed and higher volumes processed for existing significant outsourcing customers.

- EFT transaction processing business increased 15% during fiscal 1995 due primarily to an increase in the number of ATMs processed, particularly from an increase in low-cost ATM devices.

- Revenue from image management services increased 5% during fiscal 1995 due to the acquisition of Microfilm Services Company in January 1995.

- A three-year summary of source of revenue by service line is also shown on the following page.

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Affiliated Computer Services, Inc.
Five-Year Financial Summary
($ Millions, except per share data)

	Fiscal Year				
Item	6/95	6/94	6/93	6/92	6/91
Revenue from continuing operations	$313.2	$271.1	$189.0	$149.9	$146.8
• Percent change from previous year	15%	43%	26%	2%	19%
Income before taxes	$29.8	$20.2	$15.8	$9.2	$5.6
• Percent change from previous year	48%	28%	72%	64%	239%
Net income	$17.6	$12.3	$9.5	$5.7	$3.5
• Percent change from previous year	43%	29%	67%	63%	224%
Net earnings per share	$1.36	$1.08	$0.84	$0.52	$0.42
• Percent change from previous year	66%	29%	62%	24%	205%

Affiliated Computer Services, Inc.
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	6/95		6/94		6/93	
Product/Service	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Outsourcing services	$174.1	55%	$152.2	56%	$118.5	63%
EFT transaction processing	64.5	21%	56.0	21%	43.6	23%
Image management services	65.9	21%	62.9	23%	26.9	14%
Professional services	8.7	3%	--	--	--	--
Total	$313.2	100%	$271.1	100%	$189.0	100%

Interim Results

Revenue for the six months ending December 31, 1995 reached $180.6 million, a 26% increase over $142.9 million for the same period in 1994. Net income reached $10.7 million, a 33% increase over $8.1 million for the same period a year ago.

- Revenue growth was attributed to strong new business signing in outsourcing, the continued expansion of the EFT network, and the effect of acquisitions.
- ACS has increased the number of ATMs in its network by more than 50% in the last six months, with more than 4,600 ATMs installed throughout the country.

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Market Financials

ACS' target market for its commercial outsourcing services consists of medium-sized to large commercial organizations with time-critical, transaction-intensive information processing needs.

- This includes retailers, wholesale distributors, health care providers, and telecommunications, transportation and other commercial companies.
- The primary geographic market for these services is the U.S., although ACS evaluates international opportunities from time to time.

ACS' target financial services customer base is primarily regional, non-money-center financial institutions.

- Most of ACS' financial processing customers are based in the southwestern U.S., and back-office services are provided in the southwestern and northeastern U.S.
- Securities processing customers are primarily located in the northeastern U.S.
- Currently, the majority of ACS' processing financial institution customers are commercial banks, although ACS intends to continue its efforts to expand the number of thrifts and credit unions serviced and to market to all sizes of financial institutions.

EFT services are marketed to financial institutions and retailers, primarily in the southern U.S.

Geographic Markets

Virtually 100% of ACS' revenue is derived from the U.S.

Acquisitions

In March 1996, ACS acquired a majority stake in Unibase Technologies, Inc. Terms of the acquisition were not disclosed.

- Unibase, founded in 1985 and based in Salt Lake City (UT), is a nationwide provider of high-speed data capture and database management services. Millions of information records are digitized and transmitted daily from customer locations throughout the country for high-speed conversion and database update.
- Unibase clients include United Parcel Service and American Express Company.
- Unibase, with approximately 1,285 full-time employees, had revenue of $27 million for the fiscal year ending September 30, 1995.
- Unibase will operate as a division of ACS.

In December 1995, ACS acquired a majority interest in The LAN Company.

- Based in the greater Philadelphia area, The LAN Company provides network design and installation services and document management systems to law firms and commercial firms in the Northeast.
- With offices in Pennsylvania, New Jersey and Massachusetts, The LAN Company reported revenue of approximately $12 million in 1995.

In September 1995, ACS acquired Technical Directions, Inc. of San Diego (CA). Terms of the acquisition were not disclosed.

- Technical Directions provides contract computer programming services to approximately 35 clients in southern California.

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- The operations of Technical Directions will join ACS' professional services subsidiary, The Systems Group (TSG). The combined companies will have 350 employees and annual revenue of more than $30 million.

- The acquisition allows TSG to expand the variety of programming skills its offers.

In August 1995, ACS acquired MEDIANET, Inc. of Austin (TX).

- MEDIANET is an on-line marketing services company that provides claims processing for co-op marketing programs, serving many of the largest Fortune 1000 companies.

In April 1995, ACS acquired McCoy Myers and Associates of Amarillo (TX). Terms of the agreement were not disclosed.

- McCoy Myers was a privately held bank processing company serving more than 100 banking clients in Texas, Oklahoma, Kansas and New Mexico.

- McCoy Myers offers hardware-independent software compatible with other UNIX products that is available for installation on client hardware or ACS hardware for clients preferring a service bureau environment.

- The acquisition complements ACS' service offerings to the financial industry.

In February 1995, ACS acquired certain assets of TOTAL/1 Services Corporation of Houston (TX). TOTAL/1 was a privately held credit union processing company serving more than 65 credit unions in the Southwest.

In January 1995, ACS acquired 70% of the outstanding common stock of The Systems Group, Inc. (TSG) of Dallas (TX).

- TSG was a privately held provider of professional services, primarily in the Dallas/Fort Worth area. With offices in Dallas and Atlanta, TSG had revenue of more than $14 million during 1994.

- TSG now operates as a subsidiary of ACS.

In January 1995, ACS' Dataplex subsidiary acquired Microfilm Service Company, Inc. (MSC) of Seattle (WA) for a combination of cash and ACS stock.

- MSC captures, stores, manages and retrieves information using microfilm, microfiche, imaging, optical disk technology and paper. MSC, with offices in Seattle (WA) and Portland (OR), had 1994 revenue of approximately $8 million.

- The acquisition expands Dataplex's customer base in the Pacific Northwest.

- The operations of MSC have been merged into Dataplex.

In January 1995, ACS acquired the item processing business of Hancock Bank of Louisiana.

- The acquisition included the bank's Baton Rouge operations, resulting in the formation of the ACS Baton Rouge Data Center.

- This center provides a range of information processing, image processing and back-office services for Hancock Bank and other financial institutions using Unisys hardware and ITI software.

Employees

As of June 30, 1995, ACS had approximately 2,800 employees.

The company currently has more than 4,600 employees.

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Key Products and Services

Outsourcing—Commercial Services

ACS' primary outsourcing services provided to commercial businesses include on-line and batch processing of data and network management assistance.

- The mission-critical application systems processed by ACS for its customers include financial, human resources, retail and wholesale inventory distribution, health care management, transportation management, commercial and residential telephone billing, and software development systems.

- Services are generally provided on a variety of client/server and mainframe platforms at ACS data centers. In rare instances, ACS may operate a customer's data center under a facilities management arrangement.

- Host data centers in Dallas (TX) and Santa Clara (CA) serve customers throughout the U.S.

- Commercial processing services are typically priced on a resource utilization basis rather than on the basis of accounts or transactions processed.

Contract examples include the following:

- In March 1996, ACS announced it had restructured and extended its outsourcing agreement with Caremark Inc., its largest client. ACS will provide an advanced fault-tolerant environment with fully redundant power supplies, telecommunications facilities, and RAID-based DASD superstrings.

- In late 1995, ACS signed an agreement with the American Medical Association (AMA) whereby ACS will migrate the AMA's mainframe-based processing operations to ACS' computing center in Dallas. ACS will also support the AMA's internal software development for financial, human resource, database management and other business applications.

- During 1995, ACS was awarded a three-year outsourcing contract with Scripps Health to provide mainframe processing from the ACS data center in Santa Clara (CA).

- During 1995, ACS was awarded an outsourcing contract with Hexcel Corp. to provide mainframe processing from the ACS data center in Santa Clara. ACS will also design and implement a frame-relay wide-area network.

- In August 1995, ACS announced a three-year agreement with Zebco, a division of Brunswick Corporation, to support Zebco's transition from legacy mainframe to client/server technology. ACS is supporting Zebco's financial, sales, manufacturing and distribution applications at the ACS Computer Utility Center in Dallas.

- In June 1995, ACS was awarded a seven-year agreement valued at $12 million to $18 million by Keystone International to support Keystone's transition from legacy systems and local-area networks to SAP's R/3 system.

- In May 1995, ACS was awarded a contract to provide mainframe computing services for the TRW Space & Electronics Group.

Other outsourcing clients include ScrippsHealth, NYNEX, Loma Linda Medical Center, Pope & Talbot, Lend Lease Trucks, and Gold Coast.

Outsourcing—Financial Services

ACS offers a range of outsourcing services to commercial banks, thrifts and credit unions.

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- ACS satisfies its customers' core processing requirements (deposits, installments, commercial and mortgage loans, financial accounting and reporting, and central information file processing) through both on-line and remote batch processing, data entry systems, full on-line central information file and in-bank data delivery systems.

- ACS' mainframe-based processing solutions to financial institutions use ACS' proprietary software (ACS Advantage) or software licensed from third parties, including the Kirchman Corporation and Information Technology, Inc. (ITI). Of the financial institutions receiving full processing services from ACS, 30 customers are processed using the ACS Advantage system, 27 are processed using Kirchman systems and 12 are processed using ITI systems.

- The acquisition of McCoy Myers and TOTAL/1 during fiscal 1995 enhanced ACS' offerings to smaller financial institutions via UNIX-based, proprietary software products designed for in-house or service bureau processing for banks and credit unions. These businesses provide processing services to 35 banks and credit unions on a service bureau basis and provide software maintenance and support to 120 customers.

- Full back-office services (including proofing and encoding, bulk filing and statement preparation) are provided by ACS to accommodate additional check-processing and item-capture needs of customers.

- ACS expanded its back-office services in 1995 through an agreement with the Superintendent of Banks of the State of New York, which resulted in the addition of item processing services, under a subcontract arrangement, to more than 275 banks, savings banks, thrifts and credit unions, primarily in the Northeast.

- ACS' outsourcing services to financial customers are typically priced on the basis of account volume.

- The total number of accounts processed by ACS for its financial institution customers as of June 30, 1995 exceeded 700,000.

In addition to providing core processing and back-office services, ACS provides securities processing services using proprietary software to money-center banks, mutual funds, and limited partnerships. These services include stock transfer and corporate reorganization services, processing for partnerships and mutual funds and processing for governmental escheatment proceedings.

ACS also offers a variety of ancillary services and products to smaller financial institutions to enable them to compete with larger financial institutions. These services and products include voice-response access banking, safe deposit box accounting, cash management services, imaging services and optical disk/report recall and on-line reports.

ACS Merchant Services, formed in September 1995, functions as a full-service processor of credit and debit bank card transactions for merchant and agent banks. These services include terminal software applications for retail, lodging, restaurant and other types of businesses. ACS Merchant Services also provides full help desk services for both hardware and settlement problems, chargeback assistance and customer POS solutions. There are currently seven bank customers.

As of June 30, 1995, data processing outsourcing services were provided to more than 600 financial institutions and other customers. Of these customers, more than 100 received full processing services, more than 350 received back-office processing services,

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approximately 30 received securities processing services, and more than 120 received software maintenance support.

Contract examples include the following:

- In December 1995, ACS was awarded a multimillion-dollar transitional outsourcing contract with GATX Capital Corp. to support GATX's transition from legacy systems to SAP's R/3 client/server environment.

- In September 1995, ACS announced an outsourcing agreement with Extebank to provide account processing, back-office support and ATM processing services from ACS' Woodbury (NY) data center. Extebank, based in Hauppauge (NY) is a subsidiary of Banco Exterior de Espana.

EFT Transaction Processing Services

ACS engages in EFT transaction processing both as a third-party processor for financial institutions and retailers and on its own behalf.

ACS' MoneyMaker℠ ATM Network, one of the largest proprietary ATM networks in the U.S., is used to process electronic funds transfers (EFTs).

- MoneyMaker is a Tandem-based product featuring fault-tolerant connectivity of ATM and POS devices. MoneyMaker is fully interfaced to ACS' banking systems, permitting update of account balance information files.

- The network encompasses more than 4,625 ATMs throughout the U.S. owned or managed by ACS. Each month, the MoneyMaker network processes more than 10 million transactions and provides connections to all the major national networks.

- In a typical ATM transaction processed by ACS, a debit or credit cardholder inserts a card, which is issued by the cardholder's financial institution (card issuer), into an ATM to withdraw funds, obtain a balance inquiry, or transfer funds. The transaction is routed from the ATM to ACS' data center, where the card issuer is identified by the ID number on the card's magnetic strip. If ACS maintains the card issuer's account balance information files, ACS authorizes or denies the transaction. If ACS does not maintain the card issuer's account balance information files, the transaction is switched to the card issuer or its designated processor for authorization. Once authorization is received, it is routed back to the ATM and the transaction is completed.

- As of June 30, 1995, ACS had one million card accounts for 303 financial institution customers located in Arkansas, Illinois, Louisiana, Mississippi, New Mexico and Texas.

- MoneyMaker processing contracts generally provide for an initial term of three to five years and automatically renew unless notice of non-renewal is given. Charges for services are based primarily on the volume of transactions processed and are collected daily. Certain charges are paid monthly.

- MoneyMaker ATMs owned by ACS are generally located in retail locations such as convenience stores and grocery stores. ACS typically signs three- to seven-year contracts with retailers for the right to place ATMs in retail store locations. In exchange, ACS pays the retailer a share of the transaction-based fee revenue. As of June 30, 1995, ACS had 1,257 ATMs in retail locations throughout nine states. Retailers include Target, Walgreens, Wal-Mart and 7-Eleven stores.

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- ACS also offers low-cost ATMs (CashMaker) to retailers with lower transaction volumes. The ATMs are either owned or rented by the retailer. As of June 30, 1995, approximately 1,100 of these ATMs had been installed in retail sites in more than 25 states, of which approximately 1,000 are owned by retailers.

Contracts include the following:

- In October 1995, ACS was awarded a five-year services agreement with Card Capture Services, Inc. (CCS), whereby more than 450 ATMs will join the MoneyMaker network.

- In September 1995, ACS formed an alliance with Integrated Delivery Technologies, Inc. (IDT), whereby ACS will provide ATM processing services for IDT's Cartel Network customers. IDT/Cartel is a national ATM network for supermarkets.

- ACS has a new ten-year ATM contract with Southland for all its corporate 7-Eleven stores in Texas.

- Other EFT clients include Albertson's, Minyard Food Stores and Kroger.

ACS provides ATM maintenance services to approximately 265 customers, 63 of which are also EFT processing customers.

- As of June 30, 1995, ACS' 101 technicians maintained almost 2,000 ATM terminals of various types in 20 states.

- ATM maintenance contracts generally have a minimum initial term of three years.

- ACS provides armored car services for ATM cash replenishment by subcontracting with major armored car companies.

ACS provides electronic benefit transfer (EBT) transaction processing services to governmental agencies through its subsidiary, ACS Government Services, Inc. EBT services deliver welfare and other government benefits electronically using a debit-like card, rather than by check or other printed vouchers.

Image Management Services

Through its Dataplex subsidiary, ACS offers services that convert customer data onto suitable media, stores such data in a secure environment, and retrieves archived data. Dataplex also sells a variety of imaging equipment and supplies.

Dataplex receives customer information in a variety of media, such as paper, microfilm, computer tape, or optical disk.

- Upon receipt, the information is either duplicated or converted into another medium and then the information is returned to the customer in the desired medium.

- In many instances, a copy of the information is stored at ACS' records storage and retrieval facility in Flora (MS).

- Image management services are provided through 37 service centers in 18 states.

- Services are generally priced based on the volume of information and images (document pages, COM frames, microfilm rolls) processed, stored, or retrieved. Services are generally provided under one-year renewable contracts, with the exception of major accounts, which operate under multiyear contracts with initial terms of three years.

- Dataplex currently provides services and products to more than 12,000 customers nationwide. Financial institution customers represent about 50% of Dataplex's customer base.

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In late 1995, Dataplex signed a $2.5 million systems integration contract with The Psychological Corp. (TPC) to develop an image-enabled workflow system to automate TPC's student test scoring process.

Data Centers

ACS' outsourcing, EFT and image management services are provided through ACS' extensive national data and service center network, which consists of two host data centers, 12 remote data centers and 37 image management service centers, as well as an extensive telecommunications network.

- ACS' multiplatform host data centers in Dallas and Santa Clara have a combined processing capacity of more than 1,600 MIPS.
- Hardware and systems software platforms currently operated by ACS include a range of on-line IBM MVS, IBM DOS, IBM VM, IBM AS/400, Digital, Tandem/Guardian and UNIX processing environments.
- Remote processing centers are in Boston (MA); New York, Pearl River, Woodbury and Utica (NY); New Orleans and Baton Rouge (LA); and Austin, Ft. Worth, Houston (2) and Waco (TX).

Professional Services

Through The Systems Group (TSG), ACS provides consulting, programming and technical support services. Services are generally performed on an hourly rate basis to a changing client base under short-term contracts.

Clients

As of June 30, 1995, ACS had more than 700 outsourcing customers (of which approximately 220 were commercial customers), more than 120 software maintenance customers, 345 EFT processing customers, and more than 12,000 image management customers.

Marketing and Sales

ACS markets its services and products primarily through separate sales forces located throughout the U.S.

As of June 30, 1995, ACS' sales force included 37 sales representatives for outsourcing services, 7 sales representatives for EFT transaction processing services, and 72 sales representatives for image management services.

Alliances

ACS has a range of alliances with various vendors, including the following:

- In February 1996, Dataplex and FileNet announced a document services outsourcing alliance whereby FileNet and Dataplex will jointly market and deliver outsourced document solutions.
- In December 1995, ACS and Affinity Technology Group announced a value-added remarketing agreement whereby ACS will remarket Affinity's automated loan machines to current and future customers of ACS' MoneyMaker ATM network.
- In June 1995, ACS entered into a National Implementation Partner agreement with SAP America. Under the agreement, ACS will work with selected SAP customers throughout their transition to the R/3 client/server system. ACS will outsource the customers' existing legacy systems and provide help desk and other support services.
- In June 1995, ACS announced a joint ATM marketing agreement with Fleming Companies, Inc. whereby Fleming will

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market ACS' processing services (including transaction authorization and hardware reselling) to Fleming's retail customers. Fleming is a leading food marketing and distribution company.

- In August 1994, ACS entered into a ten-year software license with Computer Associates, making all of CA's mainframe systems available to ACS and allowing ACS' outsourcing customers to operate these products under ACS' license. ACS is also a reseller of CA's Unicenter client/server software.

Competition

ACS' competitors include the following:

- *Outsourcing*—EDS, IBM ISSC, CSC and FIserv
- *EFT processing*—EDS, Deluxe Data Corporation, FIserv, certain regional ATM networks, large financial institutions and other third-party processors
- *Image management*—First Image (a division of First Financial Management/First Data Corporation), Anacomp, and numerous small to medium-sized local and regional firms.

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COMPANY PROFILE

AICORP, INC.
138 Technology Drive
Waltham, MA 02254-9748
(617) 891-6500

Dr. Larry R. Harris, Office of the Chairman/Founder
Robert N. Goldman, Office of the Chairman/President & CEO
Public Corporation, NASDAQ
Total Employees: 150 (3/91)
Total Revenue, Fiscal Year End 3/31/91: $22,557,000

The Company

AICorp develops, markets, and supports knowledge-based/computer-aided software engineering (knowledge-based/CASE) application development tools.

AICorp's strategy includes supporting standard data processing environments, providing application and tool portability, adherence to key industry standards, developing a multi-tiered distribution channel, and offering products that support professional application programmers as well as non-technical end users.

AICorp was founded in 1975 as Artificial Intelligence Corporation by Larry Harris to develop INTELLECT™, the first natural language English query system available commercially. INTELLECT, in research and development until its introduction in early 1981, is now installed at over 700 locations worldwide.

- In June 1988, AICorp introduced its second product, KBMS® (Knowledge Base Management System), an integrated programming environment for application development, implementation, and maintenance.

- In March 1990, AICorp acquired 1st-CLASS Expert Systems, Inc. of Wayland (MA), a provider of software products that allow users to build and maintain knowledge-based applications for IBM PCs and compatibles and DEC VAX systems.

- In June 1990, AICorp made an initial public offering of 2.3 million shares of common stock. Net proceeds to the company of approximately $12.6 million are being used for general corporate purposes.

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AICorp's fiscal 1991 revenue reached $22.6 million, a 49% increase over fiscal 1990 revenue of $15.1 million. Net income for fiscal 1991 was $3.4 million, compared to net income of $1 million for fiscal 1990. A five-year financial summary follows:

AICORP, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

	FISCAL YEAR				
ITEM	3/91	3/90	3/89	3/88	3/87
Revenue	$22,557	$15,109	$11,512	$9,505	$4,980
· Percent increase from previous year	49%	31%	21%	91%	N/A
Income (loss) before taxes	$3,860	$1,097	$54	$1,120	$(3,100)
· Percent increase (decrease) from previous year	252%	*	(95%)	104%	N/A
Net income (loss) (a)	$3,423	$1,012	$54	$1,025	$(3,100)
· Percent increase (decrease) from previous year	238%	*	(95%)	133%	N/A
Earnings (loss) per share	$0.40	$0.14	$0.01	$0.14	$(0.43)
· Percent increase (decrease) from previous year	186%	*	(93%)	133%	N/A

* *Percent change exceeds 1,000%.*

(a) *Includes tax benefits of net operating loss carryforwards of approximately $1.1 million in fiscal 1991, $322,000 in fiscal 1990, and $375,000 in fiscal 1988.*

AICorp management attributes revenue growth in fiscal 1991 to the following:

- Approximately 70% ($5.2 million) of the increase was a result of increases in new licenses of the company's products. This growth is primarily attributed to an increase in the number of new KBMS software licenses on each of the product's three platforms (mainframe, DEC VAX and workstation, and PC), increased revenues from the INTELLECT product, and the addition of the 1st-CLASS product in March 1990.

- Revenues from renewal/maintenance agreements increased approximately 45% ($1.6 million), primarily due to annual renewals of license and maintenance agreements from a growing installed base of KBMS customers.

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- Consulting, education, and other revenues increased by 69% ($597,000) in fiscal 1991.

- International revenues reached $4 million in fiscal 1991, compared to $2.1 million in fiscal 1990. AICorp management expects international revenues to comprise an increasing portion of total revenues because of recent efforts to establish new distributors, and investments by AICorp Europe and other independent distributors in establishing sales and support offices in different countries.

Revenue for the nine months ending December 31, 1991 was $14.1 million, compared to $17 million for the same period in 1990. Net losses of $5.6 million include equity in losses of $3.4 million from AICorp Europe, AICorp's then 9%-owned affiliate and largest independent distributor.

- Revenues were affected by the continuing trend to downsize hardware from mainframes to PCs. The majority of AICorp's new customers are buying PC rather than mainframe copies of the company's products for their initial application development efforts.

- In December 1991, AICorp acquired the remaining 91% of AICorp Europe for 800,000 shares of AICorp common stock.

As of March 31, 1991, AICorp had 150 emoployees, segmented as follows:

Marketing, sales, and support	95
Research and development	25
Corporate and administration	30
	150

- The company currently has 150 employees worldwide.

AICorp's competitors by product area include the following:

- IBM mainframe version of KBMS: IBM, AION Corporation, and Inference Corporation

- DEC version of KBMS: Inference Corporation and Neuron Data

- PC version of KBMS and 1st-Class: Information Builders, Neuron Data, and Texas Instruments

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- INTELLECT: AICorp believes there are no direct competitors in the IBM mainframe market

Key Products and Services

Approximately 70% of AICorp's fiscal 1991 revenue was derived from new systems software product licenses, 23% from renewal/maintenance agreements, and 7% from consulting and education professional services and other, which includes royalties from third-party sources.

A three-year summary of source of revenue follows:

AICORP, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	3/91		3/90		3/89	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
Software product licenses	$15.9	70%	$10.6	70%	$8.3	72%
Renewal/maintenance agreements	5.2	23%	3.6	24%	2.6	23%
Consulting/education and other	1.5	7%	0.9	6%	0.6	5%
TOTAL	**$22.6**	**100%**	**$15.1**	**100%**	**$11.5**	**100%**

Through fiscal 1987, all of the company's software product license revenues were derived from sales of INTELLECT. Since fiscal 1988, revenues derived from the KBMS product line have grown rapidly, while revenues derived from new standalone INTELLECT licenses have declined.

- New license revenues related to KBMS were $12.6 million (80% of new license revenues) in fiscal 1991, $9.1 million (86% of new license revenues) in fiscal 1990, and $4.4 million (54% of new license revenues) in fiscal 1989.

- New license revenues related to INTELLECT were $2.6 million (16% of new license revenues) in fiscal 1991, $1.5 million (14% of new license revenues) in fiscal 1990, and $3.8 million (46% of new license revenues) in fiscal 1989.

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KBMS is a complete programming environment for the development, implementation, and maintenance of knowledge-based applications.

- KBMS uses an inference engine that implements a set of reasoning methodologies and applies them to a knowledge base. The system also incorporates advanced graphical user interface features and an English language capability.

- KBMS automatically accesses standard data bases and can interact with traditional software applications.

- The system was designed to be portable among different hardware and software platforms. KBMS currently supports MVS/ESA, MVS/SP, and VM in the IBM mainframe environment; VMS in the DEC environment; and OS/2 Extended Edition, OS/2 Standard Edition, and DOS in the PC environment. During the quarter ending June 30, 1991, AICorp announced a working model of KBMS on the Sun SPARCstation--the company's first version of KBMS for the UNIX operating system.

- Other recent announcements include:

  - A Windows 3.0 version of KBMS

  - Cooperative processing capabilities for KBMS

  - AICorp named to DEC's Cooperative Marketing Program for KBMS

- Initial license fees for KBMS on an IBM mainframe range from $90,000 to $250,000 depending on the configuration. For a DEC system, initial license fees range from $9,500 to $125,000, and for a PC, from $5,000 to $7,500.

INTELLECT is a natural language query system that provides users with conversational English language access to information stored in corporate data bases.

- INTELLECT is available only on IBM mainframes, either as a standalone product or as an option to KBMS.

- The initial license fee for the standalone INTELLECT product is $65,000.

AICorp's 1st-CLASS product, acquired in March 1990, is designed for users with little or no programming experience to build and

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maintain knowledge-based applications for IBM PCs and compatibles under MS-DOS or OS/2, and DEC VAX systems under VMS.

- License fees range from $995 to $2,495 on PCs and from $2,500 to $45,000 on DEC systems.

- Approximately 8,000 systems have been sold to date.

AICorp offers various support services, including consulting, education, and maintenance. Software products are covered by a 90-day limited warranty. Maintenance and support for products are provided as part of the annual license fee AICorp charges for mainframe customers and under annual service contracts for PC customers.

Industry Markets

AICorp derives its revenue from clients across industries.

- Manufacturing, insurance, and banking and other financial services clients represent approximately 50% of AICorp's business.

- Clients in transportation, utilities, government, consumer goods and services, communications, retail distribution, and other industries make up the remaining 50%.

KBMS is installed at customer sites in a wide range of industries, including insurance and financial services, transportation, health care, telecommunications, manufacturing, public utilities, and government. KBMS is used in areas such as underwriting, scheduling, pricing, routing and distribution, forecasting, marketing, and logistics.

- Current KBMS users include Bethlehem Steel, British Telecom, Conrail, CSX, Dean Witter, DuPont, Fleet/Norstar, Frito-Lay, London Life, Mass Mutual, MCI, Mercedes Benz, The Travelers, the U.S. Army, and the U.S. Department of State.

AICorp has various marketing relationships with IBM (OS/2 and RS/6000 Application Developer's Assistance Programs and AD/Cycle program), DEC (Cooperative Marketing Program), LEGENT Corporation, and Oracle Systems Corporation.

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Geographic Markets

Approximately 82% of AICorp's fiscal 1991 revenue was derived from North America and 18% from international sources. A three-year geographic source of revenue summary follows:

AICORP, INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	3/91		3/90		3/89	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
North America	$18.6	82%	$13.0	86%	$10.3	90%
Europe	3.6	16%	1.9	13%	1.2	10%
Other	0.4	2%	0.2	1%	--	--
TOTAL	**$22.6**	**100%**	**$15.1**	**100%**	**$11.5**	**100%**

U.S. offices are in Atlanta, Boston, Chicago, Dallas, Denver, Detroit, Los Angeles, New York City, Philadelphia, San Francisco, and Washington, D.C.

AICorp Canada, Inc., the company's Canadian subsidiary, is headquartered in Scarborough, Ontario.

In December 1991, AICorp acquired the remaining 91% interest in AICorp Europe, its largest independent distributor. AICorp Europe has wholly owned subsidiaries in the U.K., Germany, France, and the Benelux countries.

AICorp also has independent distributors in Italy, Scandinavia, Switzerland, and Australia.

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ALDUS CORPORATION
411 First Avenue South
Seattle, WA 98104
(206) 622-5500

Paul Brainerd, President and CEO
Public Corporation, NASDAQ
Total Employees: 952 (12/91)
Total Revenue, Fiscal Year End
12/31/91: $167,530,000

The Company

Aldus Corporation, formed in 1984, markets and supports desktop publishing and graphics software products. Over one million units of its flagship product, Aldus PageMaker[R], have been shipped worldwide.

The company's goal is to be the first-to-market with updated versions of its products that directly respond to expressed customer needs and to be first or second in market share for each product category the company enters.

During 1991, Aldus implemented several complementary strategies in response to recessionary and market pressures as follows:

- Anticipating a decline in computer retail store sales, Aldus began developing partnerships with other channels of distribution in the U.S. software market, notably mail-order companies and superstores, and launched several merchandising and promotional campaigns.
- In late 1991, Aldus prepared a major direct mail campaign to generate new sales from Aldus' existing installed base of registered users.
- Aldus released 13 products during 1991, including updates to each existing product, and Windows versions of several products.
- Aldus has expanded its international operations by opening another sales office in Canada, a subsidiary in Australia, a subsidiary in the Netherlands serving the Benelux countries, and a joint venture in Japan.

Acquisitions made by Aldus include the following:

- In July 1991, Aldus acquired the marketing rights to Emulation Technologies' page-imposition software. Now called Aldus PressWise, the product is scheduled for release during 1992.

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- In May 1991, Aldus acquired exclusive worldwide publishing rights to PhotoStyler from U-Lead Systems. Now called Aldus PhotoStyler, the product is a full-color image processing program running under Windows 3.0 and 3.1.

- In February 1990, Aldus acquired Silicon Beach Software Inc. of San Diego (CA) for approximately 981,000 million shares of Aldus common stock in a pooling-of-interests transaction.

  - Silicon Beach Software develops and publishes graphics applications software products for the Macintosh and IBM PCs running Windows.

  - Silicon Beach Software now operates as a wholly owned subsidiary of Aldus.

Aldus' 1991 revenue reached $165.5 million, a 24% increase over 1990 revenue of $135.0 million. Net income remained flat at approximately $23.8 million. In the five-year summary that follows, financials prior to 1991 have been restated to reflect the pooling-of-interests acquisition of Silicon Beach Software.

ALDUS CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
($ millions, except per share data)

	FISCAL YEAR				
ITEM	1991	1990	1989	1988	1987
Revenue	$167.5	$135.0	$98.6	$84.1	$44.0
· Percent increase from previous year	24%	37%	17%	91%	266%
Income before taxes	$34.7	$35.3	$25.5	$21.6	$12.5
· Percent increase (decrease) from previous year	(2%)	38%	18%	73%	205%
Net income	$23.8	$23.8	$17.1	$14.8	$8.3
· Percent increase from previous year	--	39%	16%	79%	236%
Earnings per share	$1.54	$1.63	$1.22	$1.06	$0.63
· Percent increase (decrease) from previous year	(6%)	34%	15%	68%	215%

Aldus management attributes 1991 results to the following:

- Revenue growth was attributed primarily to increased unit volume. Aldus' product line continued to expand in 1991 with

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the addition of Aldus Persuasion 2.0 for Windows, Aldus Gallery Effects 1.0, Aldus PageMaker Database Edition, Aldus PhotoStyler 1.1, Aldus FreeHand 3.0 for Windows, and a Japanese version of PageMaker for Windows.

- Enhancements to existing products included the release of PageMaker 4.0 for Windows, two releases of PageMaker for the Macintosh, two releases of Aldus FreeHand for the Macintosh, PrePrint 1.5 for the Macintosh, Personal Press 1.1 for the Macintosh, SuperPaint 3.0 for the Macintosh, and SuperCard 1.6 for the Macintosh.

- PageMaker 4.0 for Windows contributed significantly to the growth in 1991 sales, through sales of the full product as well as upgrades. Sales of the new releases of Aldus Freehand for the Macintosh and Persuasion 3.0 for Windows also helped push sales beyond 1990 levels.

- Sales grew more slowly in 1991 compared with 1990 due to recessionary conditions in Aldus' domestic and European markets in the second half of 1991, particularly in the U.K., Sweden, and France.

  - International sales were $81.4 million in 1991, a 24% increase over $65.2 million in 1990. The growth can be attributed primarily to strong sales growth in the German subsidiary as well as from the Pacific Rim division. This growth was partially offset by weak economies in areas serviced by Aldus' other European subsidiaries.

- Operating expenses grew at a faster rate than revenue, with additional spending related to developing new products and to marketing and advertising 1991 product releases. Sales and marketing expenses rose 30% to $57.2 million.

- Research and development expenses were approximately $14.1 million (8% of revenue) in 1991, compared to $11.7 million (9% of revenue) in 1990, and $8.7 million (9% of revenue) in 1989.

Revenue for the three months ending March 27, 1992 reached $44.1 million, a 9% increase over $40.3 million for the same period in 1991. Net income was $4.7 million, compared to $6.3 million for the same period a year ago.

As of December 31, 1991, Aldus had 952 employees (715 U.S. and 237 in Europe). The company currently has approximately 950 employees.

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Key Products and Services

One hundred percent of Aldus' 1991 revenue was derived from applications software products.

Aldus PageMaker, introduced in July 1985, sets up the computer screen as an electronic paste-up board and gives the user a toolbox of design aids for electronic page composition.

- PageMaker allows the user to design, lay out, and produce high-quality printed communications such as newsletters, brochures, manuals, and other more complex technical documents.

- Aldus PageMaker 4.2 for the Macintosh (released in December 1991) and 4.0 for DOS Windows (released in February 1991) are the current versions of the original PageMaker.

- During 1991, Aldus introduced its "Additions" technology, which allows third-party software developers to easily add functions to PageMaker.

- During 1991, Aldus obtained the right to distribute PageAhead Software Corporation's PageAhead product, which Aldus now markets as the PageMaker Database Edition. The product allows users to import data from a number of popular data base programs and present the information in professional-looking documents.

- Over 675,000 units of PageMaker have been shipped worldwide. The product is available in 18 language versions, including the major European languages, and Japanese, Chinese, and Russian.

Aldus FreeHand® is a Macintosh drawing program that combines advanced text manipulation with freehand sketching and drawing tools, color support, and special-effects features. Aldus FreeHand for the Macintosh version 3.1 was released in December 1991 along with the initial version of Aldus FreeHand for Windows. The Macintosh version is available in nine languages.

Aldus Persuasion® is a desktop presentation program that automates the process of creating visual aids for presentations. It is available in eight language versions. The current version for the Macintosh, Persuasion 2.1, began shipping in December 1991. Persuasion 2.0 for Windows, the first version for the Windows platform was released in May 1991 and updated to version 2.1 in February 1992.

Aldus PhotoStyler™ is a full-color image-processing application for Windows that allows a user to adjust, retouch, composite, or create

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from scratch full-color images for desktop publications and presentations.

Aldus PrePrint™, released in June 1990, is used to generate four-color separations of entire publications, including text, illustrations, and photographs. The product is designed specifically to work with Aldus PageMaker for the Macintosh.

Silicon Beach Software Products:

Aldus SuperPaint® combines painting and drawing capabilities in a single program for Macintosh general business users and graphics professionals. Version 3.0 was released in September 1991.

Aldus Digital Darkroom™ is an image processing program for the Macintosh that functions as a computerized darkroom for enhancing, retouching, and composing grayscale and bitmapped images.

Aldus Super 3D™ is three-dimensional modeling and animation software for architects, engineers, designers, and others with 3-D modeling needs.

Aldus Personal Press™ for the Macintosh is an entry-level page layout program for new desktop publishers. It offers predesigned templates and automated features for quick assembly of printed materials.

Aldus Gallery Effects™ allows graphics designers working on a Macintosh to transform color and grayscale bitmapped images into sophisticated art. Each edition offers special effects designed to extend the capabilities of existing graphics software.

Support services available from Aldus include the following:

- Domestically, all newly registered Aldus product users in the U.S. receive 90 days of free telephone technical support. Additional support is available to registered users through the CustomerFirst extended support program. For registered users not covered under the CustomerFirst program, technical support is available through a 900 telephone number.

- The *Aldus Discover* series of training materials, available directly from Aldus and educational resellers, provides training and support for Aldus PageMaker, Aldus FreeHand, and Persuasion on both the Windows and Macintosh platforms. *Aldus Discover*-based training is offered through Aldus Authorized Trainers, educational institutions, and dealers.

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- Aldus Corporate Services, for corporations using Aldus products, offers technical assistance, training packages, and written materials for corporate information centers and support groups.

Industry Markets

Aldus' products are used by business and other professionals across industries.

Geographic Markets

Approximately 51% of Aldus' 1991 revenue was derived from the U.S. and 49% from international sources.

ALDUS CORPORATION
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	1991		1990		1989	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
U.S.	$86.1	51%	$69.8	52%	$52.0	53%
International (a)	81.4	49%	65.2	48%	46.6	47%
TOTAL	**$167.5**	**100%**	**$135.0**	**100%**	**$98.6**	**100%**

(a) Includes European revenue of $65.4 million, $54.4 million, and $37.5 million, for 1991, 1990, and 1989, respectively.

Aldus distributes its products primarily through distributors, resellers, and OEMs.

- Aldus markets its products in the domestic retail channel through national distributors, large-volume resellers (e.g., Egghead), and independent resellers.

- Throughout 1991, Aldus had distribution agreements with Ingram Micro and Merisel. Ingram Micro accounted for 17%, 16%, and 17% of consolidated net sales during 1991, 1990, and 1989, respectively.

- Aldus also markets its products domestically through corporate reseller chains (Corporate Software, Softmart, and Software Spectrum), superstores (Comp USA and Computer City), and through mail order houses (Macwarehouse).

Outside the U.S., Aldus localizes its retail products, including user messages and documentation, for distribution in other countries.

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- Aldus Europe localizes Aldus software and documentation into European languages.

- Aldus France, Aldus Germany, Aldus Sweden, Aldus Benelux, Aldus Australia, and Aldus U.K. provide sales, distribution, marketing, and technical support for Aldus products in their respective regional markets. Aldus has established sales offices in Canada, Spain, and Italy to assist in the promotion of sales through authorized distributors.

- In April 1992, Aldus announced the formation of Aldus K.K., a Tokyo-based joint venture with something good inc. Aldus K.K. will be responsible for the development, marketing, sales, and customer support of Japanese-language versions of Aldus products. Aldus has had various agreements with something good inc. since 1989.

- Aldus distributes its products throughout the remaining international markets through authorized distributors.

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INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

August 1996

ALLTEL Information Services, Inc.

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ALLTEL INFORMATION SERVICES

Status:	Subsidiary
Parent:	ALLTEL Corporation
Employees:	7,500 (8/96)
Revenue:	$926,300,000
Fiscal Year End:	12/31/95

Key Points

- ALLTEL Information Services, Inc. provides application software, information processing management, and outsourcing services to multiple industries.
- During 1995, the company changed its name from Systematics Information Services, Inc. to ALLTEL Information Services, Inc.
- In August 1996, ALLTEL Information Services announced its Enterprise Network Services Division that offers network consulting, integration, and operations services.
- In July 1996, the company signed its first international telecommunications outsourcing contract to support the Philipino Telephone Corporation (Piltel).
- In April 1996, the Healthcare Division announced *ALL*Sourcing™, a comprehensive package of health care IT products and technology capabilities.
- In March 1996, the company's Global Financial Division announced Millennium Management℠, a service to provide a

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software application solution for the accommodation of the year 2000.

- In March 1996, ALLTEL Information Services entered into an agreement with Five Paces, Inc. to provide secure software, technical support and processing, implementation, and consulting services for financial services companies offering services over the Internet.

Company Description

ALLTEL Information Services, Inc., through its operating divisions and subsidiaries, provides advanced application software, information processing management, and outsourcing services to the financial services, mortgage, telecommunications, and health care industries.

The company was founded in 1968 as Systematics Information Services, Inc. and was acquired by ALLTEL Corporation of Little Rock (AR) in 1990 in a pooling-of-interests transaction valued at $500 million.

- ALLTEL, with 1995 revenue of $3.1 billion, provides local and long-distance telephone service, information services, cellular service, and product distribution.

- The information services sector has become an increasingly important contributor to ALLTEL's growth, and in 1995 accounted for approximately 30% of ALLTEL's revenue, up from 29% in 1994.

Organization and Structure

ALLTEL Information Services is organized into six market-focused divisions—Financial Services Division, Global Financial Division, Telecom Division, Mortgage Division, the Healthcare Division, and the Enterprise Network Services Division. Each of these divisions offers software products as well as outsourcing and consulting services.

Headquarter support divisions and groups include Human Resources and Communications, Business Development, Shared Services Division, and Legal.

A business model of the organization appears on the following page.

- The Financial Services Division, headquartered in Little Rock (AR), provides total information-based solutions, including outsourcing services, application software products, training, and professional services to institutions in the financial services industry with assets under $30 billion. This division includes Sales, Outsourcing Services, Software Services, Marketing, Development/Support, Client/Server Development Support Center, and Community Bank Groups.

- The Global Financial Division, headquartered in Little Rock (AR), provides application software, outsourcing services, and support services to U.S. financial institutions of $30 billion or more, financial institutions outside the U.S., U.S.-based subsidiaries of international institutions, and others that engage in significant international banking activities.

  - This division includes International Outsourcing; Strategic Planning; Asia Region; Europe, Middle East, and Africa Region; Global and Major Accounts Operations; Client Operations; Sales; Marketing and Sales Support; and Wholesale Banking.

  - The Global Financial Division serves customers in 40 countries outside the U.S.

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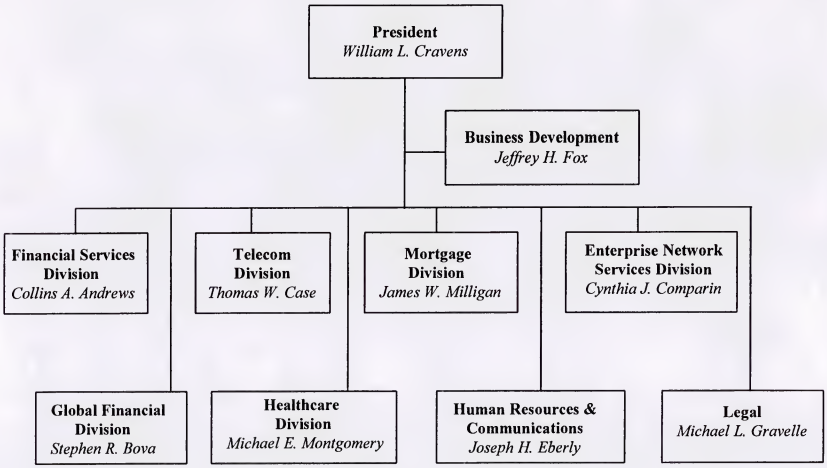
Exhibit

ALLTEL Information Services , Inc.



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- The Telecom Division, headquartered in Little Rock (AR), provides software and outsourcing services to wireline and wireless telephone companies in the U.S. and around the world.

- The Mortgage Division (formerly Computer Power, Inc.), headquartered in Jacksonville (FL), is the largest U.S. provider of mortgage application software and processing services to firms handling residential mortgage loans.

- The Healthcare Division, headquartered in Little Rock (AR), provides a range of health care information technology management services and application software through its *ALL*Sourcing product package. These products range from the division's TDS 7000 Series® patient-care-based information software line to facilities management, remote processing, network management, disaster recovery, hardware maintenance, business reengineering, and other IT management services.

- The Enterprise Network Services Division, headquartered in Little Rock (AR), provides network consulting, systems integration, and operations services to all businesses that ALLTEL serves.

Company Strategy

ALLTEL Information Services' current strategy is to expand in its chosen markets—financial services providers, mortgage companies, telecommunications companies (wireline and wireless), and health care providers—and to seek markets in other business sectors that are synergistic with its expertise.

ALLTEL Information Services continues to enhance its application software offerings to keep itself competitive and up to date. Next to its investment in people, the company's largest investment has always been in its software and technology.

ALLTEL Information Services has been expanding its software through acquisitions, investments, and licensing agreements. The company continues to form agreements with third-party providers to assist its customers with niche products and services.

Financials

Total 1995 revenue reached $926.3 million, an 8% increase over 1994 revenue of $861.5 million. Operating income rose 2%, from $129.8 million in 1994 to $132.0 million in 1995.

A five-year financial summary is shown on the following page.

The 1995 revenue increase was primarily attributed to growth in telecommunications and health care outsourcing operations.

- Telecommunications revenues increased primarily due to volume growth in existing data processing contracts and the addition of an outsourcing contract with Citizens Telecom.

- Health care revenue increased primarily due to the acquisition of Medical Data Technology in 1994 and the steady growth of long-term outsourcing contracts.

- Additional software maintenance revenue and an increase in the number of mortgage loans processed also contributed to the increase in revenue.

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ALLTEL Information Services, Inc.
Five-Year Financial Summary
($ Millions)

	Fiscal Year				
Item	1995	1994	1993	1992	1991
Revenue	$926.3	$861.5	$677.8	$569.0	$477.0
• Percent change from previous year	8%	27%	19%	19%	41%
Operating income	$132.0	$129.8	$116.6	$94	$56
• Percent change from previous year	2%	11%	23%	70%	27%

Interim Results

Revenue for the six months ending June 30, 1996 reached $460 million, a 3% increase over $446 million for the same period in 1995. Operating income for the period rose 15%, to $65 million.

Market Financials

The company markets its products and services to the financial, mortgage, telecommunications, and health care industries.

Approximately 43% of ALLTEL Information Services' 1995 revenue was derived from the banking industry (down from 49% in 1994), and 57% was from newer business areas such as telecommunications and health care. A further breakdown of 1995 revenue follows:

Banking	43%
Telecom	24%
Mortgage	16%
Health care	11%
International	6%
	100%

Primary markets for ALLTEL Information Services divisions are described below:

- Financial Services Division—U.S. financial services industry players with assets under $30 billion
- Global Financial Division—The nation's commercial banks and financial and savings institutions outside the U.S.—primarily Europe, Asia, and South America
- Telecom Division—The top 150 telephone companies and top 50 cellular companies in the U.S.
- Mortgage Division—Financial institutions, originating or servicing single-family mortgage loans, that have sold the loans in the secondary market while continuing to service the loans
- Healthcare Division—Single- (hospital) and multi-site health care facilities in the U.S., Canada, the U.K., and continental Europe
- Enterprise Network Services—Marketed to all industries served by ALLTEL Information Services

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Revenue Analysis by Product Line

INPUT estimates that approximately 77% of ALLTEL Information Services' 1995 revenue was derived from systems operations, 21% from application software products, and 2% from consulting, education, training, and disaster recovery planning.

Geographic Markets

ALLTEL Information Services serves customers in 49 states and in 44 countries outside the U.S.

Acquisitions and Divestitures

In May 1995, ALLTEL Information Services acquired Vertex Business Systems, Inc. of New York, a provider of international banking software products and services. Vertex is now operated as part of ALLTEL Information Services Global Division.

In November 1994, ALLTEL Information Services acquired Medical Data Technology, a privately held New Jersey company that provides information processing services to 17 hospitals in the northeastern U.S.

In October 1995, ALLTEL Information Services sold its Document Management Services Division (DMS) to Fiserv, an independent provider of financial data processing systems.

Employees

ALLTEL Information Services currently has approximately 7,500 employees.

Key Products and Services

ALLTEL Information Services' products and services are designed for the financial industry (banks, savings institutions, credit unions, mortgage service, and finance companies), the telecommunications industry (wireline and wireless companies), and the health care industry (hospitals and nursing homes).

ALLTEL Information Services provides on-site and remote outsourcing services to financial institutions, mortgage companies, health care providers, and wireless and wireline telephone companies.

- The company staffs, equips, and operates information processing centers through which it provides these services.
- Information processing contracts are typically for a multiyear period.

Financial Services Division

In the financial services arena, ALLTEL Information Services offers the following products and services:

- On-site and remote processing services as well as single application outsourcing services
- A complete set of integrated banking and financial applications software, termed Systematics Financial Software, targeted at financial services companies and financial institutions with under $30 billion in assets. The Financial Services Division also provides consulting services to community banks and larger banks.
  - The software products run on IBM mainframes under DOS/VSE, VM, and MVS and client/server platforms.
  - All applications are available through the Outsourcing Services Group and may be purchased as individual software products or as a total integrated system. All products are backed by training, documentation, product enhancements, support, and consulting.

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- ALLTEL Information Services also markets the Horizon Banking System, a multibank, multibranch system for community banks with $50 million to over $1 billion in assets. Horizon is an AS/400-based system available as an in-house, remote, or on-site outsourcing solution.

The Financial Services Division recently introduced *Call Center Solutions*, a package for call centers including total call center management, implementation services, and technology, and *Customer Service Workstation*, a call center sales and servicing tool.

Further product announcements include:

- An *Internet banking package*—Includes Five Paces secure Internet banking applications, technical support and processing, implementation, and consulting
- *Systematics information warehouse facility*—Uses a UNIX-based relational database structure to consolidate data from multiple applications, vendors, and platforms quickly and easily
- The *Executive Notebook*—Provides a graphical interface that allows mid- to senior-level management to drill down to the next lower level of detail

The Community Bank Group of the Financial Services Division made the following announcements:

- *Executive Information Services* (EIS)—A PC-based application that allows executives to analyze their financial position quickly and easily
- *Imaging Solutions for Proof of Deposit* and *Image Statements*—PC software and hardware to manage check processing
- A cash management solution that includes account reconciliation, remote ACH acquisition, and balance reporting

Disaster Recovery

Customers, primarily financial institutions, may subscribe to either a shell facility or a fully equipped facility, generally for a term of five years.

Disaster backup services are marketed only to ALLTEL Information Services' contract clients in all industries served.

Training Services

ALLTEL Information Services assists financial services clients in implementing training in their organizations.

Training services assistance includes:

- Assessing needs
- Developing strategy
- Developing/customizing courses and course materials
- Training coaching trainers
- Post-conversion training reviews

Formal courses are offered through ALLTEL Information Services' Career Development Center in Little Rock, providing training support for ALLTEL Information Services' software products to employees and clients.

Branch Automation Services

ALLTEL Information Services' branch automation solution is a set of products that operate on PC LANs in branch offices and that are compatible with ALLTEL Information Services' host banking applications.

- ALLTEL Information Services provides an authoring tool, model applications for teller and platform functions, and the host

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connectivity software that allows the branches to access the central mainframe computer.

To reduce the risk and time to implement a branch automation system, ALLTEL Information Services provides complete turnkey or partial systems integration services.

Global Financial Division

The Global Financial Division offers a range of software and consulting services.

Software

ALLTEL Information Services provides a complete set of integrated banking and financial application software known as Systematics Financial Software, targeted at U.S. financial institutions of $30 billion or more, financial institutions outside the U.S., U.S.-based subsidiaries of international institutions, and others that engage in significant international banking activities.

- The software products run on IBM mainframes under DOS/VSE, VM, and MVS and client/server platforms.
- All applications are available through the Global Financial Division and may be purchased as individual software products or as a total integrated system. All products are backed by training, documentation, product enhancements, support, and consulting.
- International capabilities for ALLTEL Information Services' software include an Origination and Warehouse System, Translator Facility, and multicurrency features.
- ALLTEL's wholesale banking software is modular or a fully integrated, multicurrency package designed to run in a PC LAN, UNIX, or IBM AS/400 environment. ALLTEL recently purchased Vertex, which supplies complete multicurrency solutions for the dealing room, treasury, and commercial operations of international banks. Vertex's complete range of wholesale banking products run on both the mainframe and client/server UNIX and PC platforms.

Consulting Services

ALLTEL Information Services provides a range of consulting services that address business issues and the application of technology to improve productivity and financial performance of U.S. and international institutions.

- The services are geared to the financial industry, where ALLTEL Information Services offers applications software solutions.
- Consultants are experienced, successful bankers.

ALLTEL Information Services' business consulting services focus on the following banking lines:

- Back-office operations
- Retail banking and delivery systems
- Lending and loan operations
- MIS and technology

In March 1996, the Global Financial Division announced Millennium Management, a new service for financial institutions that provides a solution for software applications that have not been corrected to accommodate the year 2000.

- ALLTEL Information Services provides project management, staff resources, and toolsets to manage code analyses and

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modification on all types of software systems.

- ALLTEL has licensed CAP GEMINI America's integrated toolset for use under Millennium Management.

- The company also has an agreement with Information Management Resources (IMR) to jointly provide year 2000 solutions using IMR's offshore capabilities and *Transform2000*™ conversion toolset.

Telecom Division

ALLTEL Information Services' Telecom Division develops and markets billing services and customer care software, as well as data processing and outsourcing services, for wireless and wireline telecommunications companies.

Products and services offered include:

- Full, remote, and partial information outsourcing services

- Virtuoso® wireless customer service and billing software acquired from C-TEC in 1990. Virtuoso is an information management system for IBM AS/400 and mainframe computers targeted to wireless telephone companies.

- Virtuoso I, which is being developed by the Telecom division as a client/server-based customer care and billing information management system

- CAMS (Customer Account Management System) Wireline software

- Software development, customization, and maintenance support systems

- Systems integration and output processing (mail services)

- Business process reengineering and consulting

- Training

- Disaster recovery services

Mortgage Division

ALLTEL Information Services' Mortgage Division is a leading provider of data processing services and application software and systems to financial institutions originating and/or servicing single-family mortgage loans, that have sold the loans in the secondary market while continuing to service the loans. Other services include consulting, training, and portfolio conversion.

The division also offers an integrated package of information processing solutions as follows:

- Loan Origination—From laptop origination through closing

- Secondary Marketing—Complete risk analysis and position management, including delivery and post-closing document tracking

- Loan Servicing—Customer service, escrow management, default management, investor reporting and accounting, cash management, and interfaces to ALLTEL Information Services' retail systems

- Support Services—Consulting, training, conversion and acquisition services, and customized business solutions

- Management Services—Full outsourcing, remote processing options, Executive Decision Making Support, Portfolio Evaluation, and Disaster Recovery

Over the past year, the Mortgage Division announced several new products, including:

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- *CPI Passport*™—A mortgage information warehouse complete with a graphical user interface, to assist mortgage bankers in analyzing competition, market shifts, regulatory requirements, and other trends
- *CPI Navigator*™—An electronic library of product documentation
- *CPI Director*™—An integrated workflow system scheduled for release in the third quarter of 1996
- *ALLTEL InterView*™—Designed as a traveling sales office incorporating all the tools that a loan originator needs for laptop point-of-entry in a Windows-based environment
- *ALLTEL Interchange*™—An open, value-added EDI network linking loan originators, lenders, investors, and mortgage service providers nationwide
- *ALLTEL InterAct*™—Automates new mortgage loan processing

Healthcare Division

ALLTEL Information Services' Healthcare Division provides information technology management services and applications software to medium to large health care organizations throughout North America and Europe using its new IT management concept, *ALL*Sourcing.

- *ALL*Sourcing uses a wide range of expertise and services available through the various ALLTEL Information Systems divisions and ALLTEL Corporation. It includes a management system for health care, information and business, telecommunications, and network management.
- Software is typically licensed to hospitals under perpetual license agreements.

Other services include:

- Facilities management—Contracts in which the division assumes total responsibility for a customer's information management operation are typically for five to seven years.
- Remote processing through the Medical Data Technology subsidiary
- Network design, implementation, and management
- Disaster recovery
- Software and hardware maintenance—Normally contracted for periods of five to seven years
- Business reengineering
- Implementation
- Training
- Consulting
- Charter Program—Contracts in which customers receive new software products and new software releases for a fixed annual fee are typically for five to seven years.
- Other IT management services

The TDS 7000 Series® is a patient care-centered health care enterprise information system with full functional support for physicians, nurses, and other clinicians, based on a single, integrated Permanent Patient Record (PPR).

- The PPR can maintain as many as 16 million patients on-line, in real time.

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- The TDS 7000 Series operates on IBM S/390-based enterprise servers (in-house or remote); IBM RS/6000, IBM PCs and compatibles; mobile-computing products from LXE, Proxim, Fujitsu, and IBM; and uses Lexmark, Genicom, or Hewlett-Packard laser printers.

- The TDS 7000 Series is compatible with the ISM OS/390, MVS/ESA, and VSE/ESA environments; RS/6000, AIX operating system; IBM PC, DOS; Microsoft Windows 3.1, 3.1.1, Windows 95, and Windows NT; portable wireless environments; and Microsoft Windows for Pen Computing.

- The TDS 7000 Series was released in 1990 as the successor to the TDS health care 4000 System. This division continues to support the TDS Healthcare 4000 System as its clients migrate to the TDS 7000 Series.

Enterprise Network Services Division

ALLTEL Information Services' new Enterprise Network Services Division offers network consulting, integration, and operations services on a global basis.

This division will focus on helping customers improve service levels and maximize productivity through design, implementation, and management of voice, data, and video networks.

Clients

ALLTEL Information Services has existing contracts with over 1,200 customers in 44 countries.

Major contracts segmented by market include:

Financial—NationsBank, Citibank, Barclays, Chase, National Australia Bank, Westdeutsche Landesbank Girozentrale, Bank Leumi Trust Co., Rockland Trust Co., NordlandsBanken AS, and Banco de Credito

Telecom—Bell South Cellular Corp., C-TEC Corporation, Citizens Utilities, GTE Personal Communications, One 2 One (U.K.), Piltel (Philippines), Wireless One, ALLTEL Telephone Services, and ALLTEL Mobile

Mortgage—BancBoston Mortgage Corporation, Atlantic Mortgage and Investment Corporation, and Norwest Mortgage

Health care—St. Joseph's Hospital of Parkersburg, Mount Sinai Medical Center, Baystate Health Systems, Inc., Centre Hospitalier Intercommunal Toulon La Seyne-sur-Mer, Wirral Hospital NHS Trust, and Region 2 Hospital Corporation (Canada)

Marketing and Sales

ALLTEL Information Services has domestic sales offices in Little Rock (AR), Dallas (TX), Los Angeles (CA), New York (NY), Jacksonville and Orlando (FL), and Atlanta (GA). Regional offices in the U.K., Belgium, France, Spain, Thailand, the Philippines, Indonesia, Hong Kong, and Singapore handle sales and support in those regions.

In 1994, the Global Financial Division established a major accounts program focused on global financial organizations. The company now has customers in 44 countries around the world and employees based in 12 countries.

Alliances

In March 1996, ALLTEL and Information Management Resources (IMR) entered into an agreement to jointly provide Year 2000 solutions using IMR's offshore capabilities and *Transform2000*™ integrated Year 2000 conversion toolset. IMR has been providing large-scale, full life cycle Year 2000 conversion solutions since 1994.

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In March 1996, ALLTEL Information Services and Five Paces, Inc. entered into an alliance to offer secure software, technical support and processing, implementation, and consulting services for secure Internet banking.

Competition

ALLTEL Information Services' major competitors in the financial services industry include Electronic Data Systems, IBM ISSC, Fiserv, and Hogan Systems.

INPUT Assessment

ALLTEL Information Services is a very strong player in the financial services outsourcing market. The company has strategically implemented a business model whereby each of its divisions is able to offer a suite of software products as well as outsourcing services to customers.

Some of ALLTEL Information Services' major strengths include:

- Proven technology and products
- Commitment to the customer
- Quality service
- Expertise in multiple industries
- Proven outsourcing model
- Worldwide sales and support capability

Parent Company

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INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

December 1996

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Fax: **(508) 486-2878**
Internet:
http://altavista.software.digital.com

Status:	Public (pending)
Parent:	Digital Equipment Corporation
Employees:	186 (6/96)
Revenue:	$3,632,000
Fiscal Year End:	6/29/96

Key Points

- Formerly Digital Equipment Corporation's Internet Software Business Unit, AltaVista Internet Software develops and markets software products for use in the integrated Internet/intranet business environment.
- In December 1996, AltaVista expanded its suite of Internet software products by shipping the AltaVista Directory '97, an out-of-the-box personnel directory application for Windows NT servers.
- In November 1996, AltaVista released the AltaVista Search My Computer Private eXtension (PX) software product for searching and indexing information on the desktop.
- In September 1996, AltaVista released AltaVista ForumForum, a Web-based technology showcase for the sharing of ideas, opinions, and business information.
- Also in September, AltaVista announced the availability of AltaVista Search Intranet Private eXtension, a version of the company's AltaVista search technology designed for corporate intranets.

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- In August 1996, AltaVista released AltaVista Tunnel and AltaVista Firewall for Intel platforms.

- In July 1996, AltaVista opened a subsidiary in the Netherlands under the name AltaVista Internet Software, B.V.

Company Description

AltaVista produces software solutions that provide Internet connectivity to help "cyberworkers" find information, communicate, and collaborate over secure virtual networks.

The company's products and services are designed to integrate all levels of the work environment—Internet, enterprise, workgroup, and individual user—and to allow location- and platform-independent computing.

AltaVista provides the AltaVista Internet Search Service and other Internet services free on the Web. The company also licenses its Internet services to telecommunications and media companies outside the U.S. and to Internet content providers.

AltaVista announced plans for a future initial public offering in August 1996. No action has been taken on the offering since the announcement, and its status is currently undeclared.

The company is currently wholly owned by Digital Equipment Corporation. Upon consummation of the announced offering, Digital will beneficially own all of the Class B common stock, and thus will have the ability to direct the election of all of the directors of the company and otherwise exercise a controlling influence over the business and affairs of AltaVista.

Organization and Structure

AltaVista is headquartered in Littleton (MA); it maintains offices in San Mateo and Palo Alto (CA) and Reading (U.K.).

The company's recently formed subsidiary, AltaVista Internet Software, B.V. is located in the Netherlands.

Key company executives are summarized below.

AltaVista Internet Software, Inc.
Key Executives

Name	Title
Ilene H. Lange	President & CEO
Jeanette A. Horan	VP, Product Development
Robert E. Hult	VP, Financial Operations, CFO, & Treasurer
William A. Laing	Chief Technical Officer
Freddy J. Mini	VP, Worldwide Marketing
James E. Toale	VP, Human Resources
Ray J. Wilkes	VP, Sales-Americas
Carel F.H. de Bos	VP, Sales-Europe, Middle East, and Africa

Company Strategy

The company's goal is to be the leading supplier of software products and services for use in the integrated Internet/intranet business environment.

Specific elements of AltaVista Internet Software's strategy include:

- Increasing AltaVista brand recognition worldwide by providing free services from its Web sites and licensing AltaVista branded services to leading Internet partners

- Delivering innovative software products for Internet and intranet users by building on

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its technical expertise and that of its partners and Digital to develop products, product suites, and services for general and specific industry and business applications

- Conducting business on the Web, including marketing, communications, partner registration, sales, software distribution, and partner and customer support

- Leveraging the company's relationship with Digital Equipment for access to Digital's worldwide direct and channel sales organization, major customers, channel partners, and strategic alliance partners

Financials

AltaVista Internet Software's fiscal 1996 revenue grew to $3.6 million, a 260% increase over the previous year. The company reported a net loss of $29.9 million.

A three-year revenue summary follows:

AltaVista Internet Software
Three-Year Revenue Summary
($ Millions)

	Fiscal Year		
Item	6/96	6/95	6/94
Revenue	$3.6	$1.0	$0.3
• Percent change from previous year	260%	233%	N/A
Net income (loss)	$(29.9)	$(5.2)	$(2.7)
• Percent change from previous year	(475%)	(93%)	N/A

- Revenue growth in fiscal 1996 was primarily due to increased demand for AltaVista Firewall and the introductions of AltaVista Forum and AltaVista Tunnel.

- Since warranty and maintenance support have historically been provided by Digital through a separate business unit, these revenues have not been included in the above revenue figures. Following the completion of the announced initial public offering, AltaVista expects to offer warranty and maintenance support to its customers either directly or through authorized service providers.

Interim Results

Due to the delayed status of AltaVista's announced initial public offering, no interim results have been announced for fiscal 1997.

Market Financials

AltaVista Internet Software's target customers are business users.

Geographic Markets

Approximately 36% of AltaVista Internet Software's fiscal 1996 revenue was derived from the U.S., compared to 31% in fiscal 1995 and 37% in fiscal 1994. In fiscal 1996, the remaining 64% was derived from international markets, compared to 69% and 63% in fiscal years 1995 and 1994, respectively.

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Employees

As of July 27, 1996, AltaVista Internet Software had 186 full-time employees, segmented as follows:

Marketing and sales	36
Customer support	16
Research and development	114
Finance and administrative	20
	186

Key Products and Services

Finding Useful Information

AltaVista Search Private eXtensions, using the same technology as the AltaVista Internet Search Service, extend the AltaVista Internet Search Service through a single user interface to provide search results.

- *Intranet Private eXtension* allows employees of an organization to find information anywhere on their intranet. The eXtension is designed for medium-sized to large intranets (up to 50 million Web pages) and is currently available on Digital's 64-bit UNIX operating system.

- *Workgroup Private eXtension* searches specified files, directories and HTML data to create an index of information available and of interest to members of a business unit or department, workgroup, or small business organization. Workgroup Private eXtension runs on the Windows NT platform, and the company expects license fees to range from $500 to $20,000.

- *My Computer Private eXtension* creates an index of specified files and directories on a user's local drives and network drives. The user configures the data collector to index specific files and directories at specified intervals. Listing at $29.95, My Computer Private eXtension resides on an individual user's computer running Windows 95 or Windows NT and is able to index the file formats used by over 140 Windows-based applications.

AltaVista Directory allows information service managers to provide their users with a single, integrated on-line directory of users, customers, or other affiliated individuals, eliminating the need to print and distribute paper directories and separately update other databases as changes occur.

AltaVista Directory is targeted at medium to large organizations and a license fee for the product ranges from $500 to $20,000, depending on the number of directory entries.

Security

AltaVista Firewall provides a secure gateway between an organization's private intranet and the Internet, or between a sub-network and the rest of an intranet.

- AltaVista Firewall offers a scalable solution, from a low-end firewall with predefined security policies for small and medium-sized organizations to a high-end customized multi-firewall solution for large organizations.

- The product is sold through systems integrators and VARs at tiered prices.

AltaVista Tunnel allows authenticated external users connected to the Internet, such as telecommuters, remote sites, partners, customers, and consultants, to connect securely to an organization's intranet, including through firewalls.

- AltaVista Tunnel creates a secure Internet pathway between two intranets or between a remote individual user and an intranet.

- The two editions of AltaVista Tunnel include:

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- *AltaVista Tunnel Workgroup Edition* permits secure communications between independent intranets or between subnetworks of an intranet. The Workgroup Edition also operates as a server for multiple Personal Edition clients to allow remote individual users to connect to the intranet or subnetwork. The license fee for the Workgroup Edition ranges from $995 to $2,495, depending on the number of end users supported.

- *AltaVista Tunnel Personal Edition* permits a remote individual user to connect securely to an intranet or subnetwork via AltaVista Tunnel Workgroup Edition server software. AltaVista Tunnel Personal Edition has a list price of $99.95.

Collaboration and Communication

AltaVista Forum service provides an environment for members of workgroups to share documents, conduct asynchronous discussions or real-time conferences from multiple locations, and search an entire text of a Forum, all using a standard Web browser.

- *AltaVista ForumForum* is a free showcase of the company's collaboration technology on the Internet.

- The AltaVista Internet ForumForum Web site consists of ready-to-use time-limited Forums. Users can either register to create a new time-limited Forum or join an existing Forum.

- AltaVista manages the time-limited trial period. At the end of the trial period, the user may license the Forum product for private use on the user's own Web site or intranet.

- The license fee for AltaVista Forum begins at $495 for an entry-level, 25-user license, and ranges up to several thousand dollars, depending on the number of end users supported.

AltaVista Mail is Internet/intranet mail server software that complies with the SMTP and POP3 standards (the standard protocols for e mail servers on the Internet and intranets).

- The use of standards allows the AltaVista Mail server to support a range of client software (including Microsoft Exchange, Netscape Mail and Eudora), which communicates with the mail server to allow a user to read and send e mail.

- Targeted at business units and departments, AltaVista Mail is sold directly over the Web and is distributed through VARs and OEMs for $495 per server.

Support

Product Support has historically included training, documentation, and technical support to company channel partners to ensure that they have the knowledge required to sell, implement, maintain, and provide technical support for the company's products.

- The company's AltaVista Marketspace Web site is the focal point of its support program.

- AltaVista also uses and provides incentives for channel partners to use E-mail to log calls and communicate product maintenance updates, interim (bug) fixes, frequently asked questions, and beta software releases.

Support for partner-provided Internet services is provided by the company's Web site operations team to mirror site, value-added link, and Web custom crawl partners.

Custom engineering services are mostly provided by the company's channel partners,

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but some major customers are provided customization services directly for a fee.

Clients

A sampling of AltaVista's clients includes AT&T, British Columbia Hydro and Power Authority, Computer Sciences Corporation, Woods Hole Research Center, and Xerox.

Marketing and Sales

AltaVista employs multiple distribution channels, including direct sales over the Web and sales through Digital's sales organization, major system integrators, value-added resellers (VARs), Internet service providers (ISPs), telecommunications companies, original equipment manufacturers (OEMs), and independent software vendors.

Alliances

AltaVista and Digital intend to enter into a strategic alliance agreement that provides for Digital to distribute the company's products on a nonexclusive, worldwide basis through Digital's reseller and distribution networks.

The strategic alliance agreement will also designate Digital as an authorized service provider of AltaVista to provide training, documentation, technical support, and maintenance services to the company's customers and end users.

Other alliances include:

- In August 1996, CNET Inc. and AltaVista signed a one-year agreement enabling users of CNET properties to conduct Web searches through the AltaVista Internet Search Service.
- In July 1996, Yahoo! Inc. and Digital signed a two-year agreement that established AltaVista as the preferred search engine for all Yahoo! properties that contain Web functionality.

Competition

The company's AltaVista Internet Search Service faces competition from America Online's WebCrawler, Excite's Excite and Magellan, Inktomi and Wired's Hotbot, Infoseek, Lycos, and Open Text.

In the market for information search and retrieval software, AltaVista competes with Excalibur Technologies, Fulcrum Technologies, Information Dimensions, Open Text, Personal Library Software, and Verity.

In the directory services market, AltaVista competes with both standards-based companies such as Control Data, ISOCOR, and Siemens Nixdorf and proprietary technology companies such as Banyan Systems and Novell.

In the security software market, the company competes with CheckPoint Software Technologies, Raptor Systems, and Secure Computing.

In the market for Web-based collaboration software, AltaVista competes with vendors such as Lundeen & Associates, O'Reilly & Associates, and OSTECHnologies. AltaVista Forum may also compete with products offered by Attachmate, Lotus, and Netscape.

In the market for Internet e mail server software, AltaVista competes with Software.com and Netscape. AltaVista Mail may also compete with proprietary mail server software, such as Microsoft Exchange and Lotus Development's cc:Mail and Notes.

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INPUT Assessment

AltaVista Internet Software's strengths include:

- Brand recognition established via AltaVista Internet Search Service
- Relationship and access to the resources and experience of Digital Equipment
- Industry experience of management
- Broad range of product offerings

Future challenges include:

- Establishing an independent identity from Digital
- Creating market demand for company products
- Continuing product innovation
- Creating a consistent revenue stream
- Managing transition from a unit to an independent enterprise

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COMPANY
PROFILE

AMERICAN BUSINESS COMPUTER
24 Frank Lloyd Wright Drive
P.O. Box 305
Ann Arbor, MI 48106
Phone: (313) 930-3200
Fax: (313) 930-3201

President:	Kimba Vasquez
Status:	Private
Total Employees:	40
Total Revenue:	$5,000,000
Fiscal Year End:	6/30/93

Key Points

- American Business Computer (ABC) is a pioneer in the development of electronic data interchange (EDI) software and a front runner in the UNIX environment.
- In late 1992, ABC employees repurchased the company from Thomas S. Monaghan, Inc.
- ABC continues to increase its strategic relationships/alliances for the marketing of its products. ABC now has alliances with 20 vendors, including Oracle and NCR (AT&T Global Information Solutions).

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Company Description

ABC provides EDI translation software products and services to a range of industries. INPUT estimates that ABC has over 2,200 installations of its EDE-PC, EDI-Excel and EDI-Server products combined.

ABC is one of the first vendors of "off the shelf" EDI software. With more than 17 years in the EDI business, ABC has pioneered many innovative ideas that are now standards.

Strategy

ABC is distinguishing itself as the premier provider of UNIX-based EDI software, with the most comprehensive and widely installed product line of UNIX EDI translation software.

ABC is expanding the industries it serves and significantly increasing its strategic relationships/alliances for the marketing of its products. All together, ABC has relationships with 20 vendors and is vying to have 50.

Financials

ABC's fiscal 1993 revenue reached $5 million, a 25% increase over fiscal 1992 revenue of $4 million.

It is estimated that fiscal 1994 revenue will reach $6.5 million.

Market Financials

Over the past five years, ABC has extended into the health care, manufacturing, retail, electronics, telecommunications, government, chemical and wholesale industries.

ABC's revenue is derived approximately as follows:

Wholesale and retail distribution	15%
Manufacturing (includes electronics, manuf., chemical)	25%
Telecommunications	10%
Healthcare	15%
Federal government	25%
Other	10%
	100%

ABC has a large customer base in the automobile supplier industry with its PC EDI translation software, EDE-PC.

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With its larger system, the UNIX-based EDI-Server product, ABC has targeted large hub accounts and the U.S. government through many strategic alliances.

Approximately 50% of ABC's revenue is derived from its software product licenses/royalties and 50% from implementation, consulting and other support services.

Geographic Markets

Approximately 90% of ABC's fiscal 1993 revenue was derived from the U.S. and 10% from international sources.

In addition to its headquarters in Ann Arbor (MI), ABC has offices in Atlanta (GA), Minneapolis (MN), Scottsdale (AZ) and Park City (UT).

Key Products and Services

ABC currently offers the following software products and associated support services;

Software Products:

EDI-Server is a UNIX-based gateway for integrating EDI into business environments. EDI-Server intelligently supervises, manages and tracks all EDI processes and flows, providing tight control of entire EDI workflow.

- EDI-Server provides basic EDI services such as communication, translation, auditing and unattended operation.
- Functionality includes support of X.400 and X.25; preprogrammed local-area network interfaces to SNA (LU6.2), Ethernet, TCP/IP, and DECNET; mailboxing; 4GL report writer and database; and real-time versus batch processing.
- EDI-Server enables users to connect directly to a variety of distributed hosts or to popular local-area networks, including SNA or Ethernet. It also interconnects many separately running applications in a corporation.
- An internal mailbox system is now available to provide alternatives to trading partners and reduce costs.
- An EDI-Server network architecture eliminates the redundancy of installing individual EDI translators on multiple host-based application systems, thereby reducing the resources required to maintain and EDI program. When EDI activity is localized on a

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single server, programming efforts and staff requirements can be reduced.

- EDI-Server runs on IBM RS/6000, NCR 3000, AT&T 3B, HP 9000, Sun Microsystems, Interactive UNIX and SCO UNIX environments.

- EDI-Server prices range from $50,000 to $300,000, with $150,000 to $200,000 as an average purchase price on installations to date.

EDI-ExCel is a dynamic EDI translator designed for PC or UNIX users with minimal technical expertise to get the system up and running. It is also designed to provide the easiest on-line mapping facilities, allowing for easy management of EDI operations and flexible integration into existing applications.

- EDI-ExCel comes in preprogrammed packages for the retail (EDI-ExCel/Retail) and auto (EDI-ExCel/Auto) vertical market environments.

  - EDI-ExCel/Retail provides translation capabilities, premapped and loaded auto implementations of ANSI X12 and VICS standards and a communication subsystem that includes preprogrammed links to key retail hubs (Sears) and popular value-added networks.

  - EDI-ExCel/Auto supports an automotive just-in-time program, providing translation capabilities, premapped and loaded auto implementations of ANSI X12 and AIAG standards and a communication subsystem. The communication system includes preprogrammed links to key automotive hubs (such as Chrysler, Ford and GM) and popular value-added networks.

- EDI-ExCel packages are price from $7,000 to $50,000.

EDE-PC is an automotive turnkey product that incorporates key functionality of EDI and bar coding to provide users with a standalone automotive solution.

EDI Services:

Electronic Support Service: ABC has implemented an Electronic Support Service for its customers. The service provides the following capabilities:

- A bulletin board, for access to timely tips and suggestions on software products, on-line inquiry to ABC Informant (the ABC newsletter) and a troubleshooting guide of common questions

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- On-line trouble log reporting, for routing to a support representative for resolution
- Update distribution, for automatic downloading of the latest software releases

EDI Implementation Consulting: ABC can provide implementation consulting to customers for small, to very large, EDI projects.

Other services include standards training, executive EDI training and program development and roll-out.

Marketing and Sales

ABC markets its products in the U.S. through a direct sales staff of eight employees, along with integrators and alliances.

ABC markets its products internationally through integrators and distributors.

Alliances

ABC has alliances/agreements with 20 vendors, as follows:

- GE Information Services resells ABC's PC and UNIX products under its own labels
- NCR (AT&T Global Information Solutions) has selected ABC as a Strategic Solutions Partner.
- Hewlett-Packard has selected ABC as its premier UNIX provider for HP 9000 customers.
- ABC is an Advantis Business Partner.
- ABC is a Certified Software Provider for All VANS.
- ABC has an alliance with Oracle Corporation's Federal Systems unit.
- Systems integrators for ABC include Symix, Vocam, Success Systems, Richter, GE Retail Systems, Nordic Systems, Fourth Shift, qad, Unified Communications Inc. and FDC Technologies.

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Competition

ABC's chief competitors are other providers of UNIX-based EDI software, including Premenos, Sterling Software, St. Paul Software and Texas Instruments.

ABC also faces competition from PC EDI software vendors that provide EDI products with mapping and integration features.

INPUT Assessment

ABC is distinguishing itself as a premier provider of UNIX-based EDI software. INPUT believes it makes sense to provide EDI software that runs in a UNIX environment. Since many EDI users replace their EDI software, the upgrading process can be made smoothly with UNIX-based software.

ABC has deep financial resources to support its product development along with a solid technology staff.

ABC is overcoming its limited direct sales force and distribution channels with an increasing number of various strategic relationships. ABC's alliances with GE Information Services and AT&T Global Information Solutions give it two strong customers through which ABC can channel its products. All together, ABC has 20 relationships and is targeting to have 50.

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Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

May 1996

American Management Systems, Incorporated

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Chairman: Charles O. Rossotti
Vice Chairman: Patrick W. Gross
CEO: Paul A. Brands
President: Phillip M. Giuntini
4050 Legato Road
Fairfax, VA 22033-4003
Phone: (703) 267-8000
Fax: (703) 267-5067

Status:	Public
Employees:	5,400 (12/95)
Revenue:	$632,433,000
Fiscal Year End:	12/31/95

Key Points

- American Management Systems' (AMS') revenue has increased each year for the last 26 consecutive years.
- AMS' fastest growing vertical business is telecommunications, which increased 70% during 1995, after increasing 55% during 1994 and 27% during 1993.
- AMS' client/server system development business increased 54% to $200 million during 1995, after increasing 44% to $130 million during 1994 and 55% to $90 million during 1993. AMS has also revamped its core software modules to support object-oriented programming and client/server platforms. The company projects $280 million to $320 million in client/server revenue for 1996.
- Revenues in Europe increased 83% to $139 million during 1995, with new clients added in the financial services and telecommunications markets. AMS now has offices in ten European cities.

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- In June 1995, AMS announced the formation of a new practice to address the information needs of major hospitals, health networks, and managed-care entities.

Company Description

AMS, founded in 1970, provides business and information technology consulting, including business reengineering, change management, systems integration, and systems development (including reusable and custom software) and systems implementation services to many of the country's largest corporations, hundreds of city and state governments and the federal government, and large international organizations.

Since 1982, AMS has specialized in providing services to large telecommunications and financial services firms, federal government agencies, state and local governments, and education as follows:

- Telecommunications firms: AMS provides systems consulting and integration services for order processing, customer care, billing, accounts receivable, and collections for local exchange and interexchange carriers and for cellular telephone companies. Most of AMS' work involves developing and implementing customized capabilities using AMS' applications software products as a foundation.

- Financial services institutions: AMS provides information technology consulting and systems integration services to money center banks, major regional banks, insurance companies, and other large financial services firms. AMS specializes in corporate and international banking, consumer credit management, global custody and securities systems, and bank management information systems.

- Federal government agencies: AMS provides consulting, computer systems integration, business process reengineering services, systems operations, and system development and implementation services to civilian and defense agencies and aerospace companies. AMS' work for defense agencies often involves expertise in engineering and logistics.

- State and local governments and education: AMS provides systems consulting, integration services, and applications software products to state, county, and municipal governments for financial management, revenue management, human resources, social services, and public safety functions. The company also markets services and applications software products to educational institutions.

- Other: AMS provides various professional, outsourcing, and systems integration services for large firms in other industries, including pharmaceuticals and health care.

Operations and Structure

AMS' current organization is shown in Exhibit A.

In September 1993, AMS completed the reorganization of its top management structure, begun in late 1992 with the election of Paul A. Brands as chief executive officer.

AMS is currently organized by vertical industry lines of business—Telecommunications, Financial Services, Federal Government, State and Local Government and Education, Pharmaceuticals, and Health Care Technology Services.

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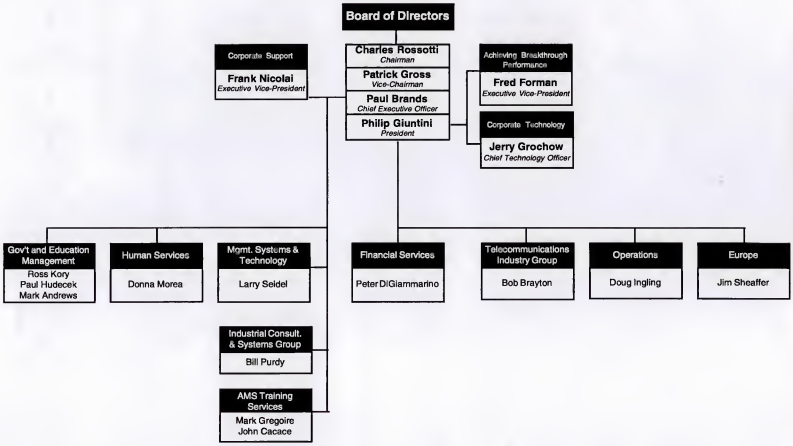
Exhibit A
American Management Systems, Inc.
Organization



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The company currently has 49 offices worldwide, including 39 in North America and 10 in Europe, with an additional office opening in Italy in 1996.

U.S. offices are in Albuquerque (NM); Arlington, Fairfax, Falls Church, Norfolk, and Richmond (VA); Atlanta (GA); Austin and Houston (TX); Birmingham (AL); Boston (MA); Charlotte (NC); Chicago (IL); Fairborn (OH), Jackson (MS); King of Prussia (PA); Lakewood (CO); Lexington Park (MD); Los Angeles, Redwood City, Sacramento, San Diego, and Walnut Creek (CA); Manchester and New Haven (CT); Minneapolis (MN); New Orleans (LA); New York and Pearl River (NY); Oklahoma City (OK); Portsmouth (NH); Providence (RI); Roseland (NJ); Sarasota (FL); Seattle (WA); and Topeka (KS).

Other North American offices are in Mexico City (Mexico), and Montreal and Ottawa (Canada).

U.S. subsidiary locations are as follows:

- AMS Operations Corporation, Inc. is in Lakewood (CO).
- AMS Technical Systems, Inc. is in Fairfax (VA).
- AMS Training Services (formerly Data Base Management Inc.) and AMS Courseware Developers are headquartered in Manchester (CT) and provide consulting and training services.

International subsidiary locations are as follows:

- AMS Management Systems Deutschland GmbH is located in Frankfurt and serves as the European headquarters. Offices are also in Dusseldorf, Munich and Stockholm.
- AMSY Management Systems Netherlands B.V. is in the Hague.
- AMS Management Systems Europe, S.A./N.V. is in Brussels (Belgium).
- AMS Management Systems U.K. Limited is in London. A branch office is located in Lisbon (Portugal).
- Nordic Business Management Systems AB is in Stockholm (Sweden).
- AMS Management Systems (Switzerland) AG is in Bern.
- AMS Management Systems España, S.A. is in Madrid.
- AMS Management Systems Canada, Inc. is in Ottawa. An additional Canadian office is in Montreal.
- AMS Management Systems Mexico S.A. de C.V. is in Mexico City.

Company Strategy

The fundamentals/core strengths of AMS' business include:

- Providing business/technology analysis and consulting
- Developing, integrating and implementing computer-based systems
- Developing reusable applications for business functions
- Managing long-term client relationships

AMS derives approximately 87% of its business each year from clients with whom it worked in the previous year.

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AMS' overall strategy for the 1990s includes:

- Specializing by industry, business function, and client size
- Managing and building on long-standing relationships with major clients in vertical markets
- Acting as a full-service business partner for clients in AMS' vertical markets
- Taking responsibility for results—not simply providing resources
- Forming alliances and partnerships with clients and other firms

AMS is targeting 20% annual growth in service and product revenue for the 1990s. AMS' growth strategy includes:

- Selling existing capabilities within existing vertical market segments
- Growth within existing vertical markets by expanding into additional market niches
  - Along functional lines, examples include corporate risk management, STRATA (a decision management system), Encounter (a point-of-contact originations utility), and CARE (Customer Analysis and Relationship Enhancement) programs in financial services markets; financial systems in the telecommunications market; the ClaimsFlo program in insurance; criminal justice and human services systems in state and local government; sponsored research programs for colleges and universities; procurement support, activity-based cost accounting, BPR, and imaging systems for federal civilian agencies; and intelligence and claims management systems for federal defense agencies.
  - Along technology lines, examples include Internet technology, object technology, client/server, imaging and workflow, graphical user interfaces, and mobile computing.
- Continued expansion in Europe, by increasing staff from 420 to more than 700, increasing offices from eight to 10, and revenue growth of 83% to over $139 million in 1995. Long-term growth markets in Europe include financial services (25%) and telecommunications (30%).
- Pursuit of selected opportunities that require combined expertise from two (or more) vertical market segments. Examples include federal financial systems and state environmental programs, telco risk management, revenue management systems for state and local governments and imaging for financial institutions.
- Periodically starting into a new vertical market segment as appropriate (e.g., the pharmaceutical industry and health care markets)

Long-term U.S. growth targets for AMS' vertical markets include telecommunications (30%-40%), insurance (20%-25%), financial services (20%), state and local government (20%), colleges and universities (20%), federal civilian (15%-20%), federal defense (5%-10%) and other (up to 5%).

In the area of AMS' client/server technology focus, the company's strategy is to:

- Deliver client/server solutions with integration to legacy systems
- Design advanced user interfaces through user-centered methodologies

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- Use object-oriented techniques through tools and analysis
- Create open systems by capitalizing on standards

AMS has established six Knowledge Centers, each of which has expertise in AMS' core disciplines. The AMS Center for Advanced Technologies, an applied research lab, is dedicated to the practical application of advanced information technologies, including client/server, object technology, mobile computing, Internet and electronic commerce, performance measurement, collaborative work environments, and data management.

Financials

AMS' 1995 revenue reached $632.4 million, a 38% increase over 1994 revenue of $459.9 million. Net income to common shareholders was $29.1 million in 1995, compared to $23.1 million in 1994. A five-year financial summary follows:

American Management Systems
Five-Year Financial Summary
($ Millions, except per share data)

	Fiscal Year				
Item	1995	1994	1993	1992	1991
Revenue	$632.4	$459.9	$364.0	$332.5	$284.4
• Percent change from previous year	38%	26	9%	17%	9%
Income before taxes	$49.8	$39.5	$30.7	$29.4	$20.3
• Percent change from previous year	26%	29%	4%	45%	15%
Net income to common shareholders after effect of accounting change (a)	$29.1	$23.1	$17.0	$17.6	$11.1
• Percent change from previous year	26%	36%	N/A	(c) 59%	17%
Net earnings per share (b)	$0.72	$0.60	$0.46	$0.50	$0.32
• Percent change from previous year	20%	30%	N/A	(c) 56%	14%

(a) Includes dividends and accretion on Series B preferred stock of $266,000, $805,000, $1.5 million, and $1.5 million in 1994, 1993, 1992, and 1991, respectively.

(b) Restated to reflect a 3-for-2 stock split effective January 5, 1996.

(c) Includes a $1.6 million ($0.05 per share) cumulative effect from a change in the method of accounting for income taxes.

A five-year summary of source of revenue by vertical market is shown on the following page.

- In the telecommunications market, services and products revenue increased 70% over 1994. More than 79% of this increase was attributed to business with non-U.S. clients, which increased 105% during 1995 to $129 million, up from $61.6 million in 1994. The telecommunications practice accounted for 37% of AMS' revenue in 1995. Business in this market is characterized by large projects, with relatively few clients.

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Approximately 90% of the 1995 service and product revenue in this market came from work with 12 clients. For 1996, AMS expects the annual growth rate in this market will be lower than that for 1995, but greater than the company's overall growth rate.

American Management Systems
Five-Year Source of Revenue by Target Market
($ Millions)

	Fiscal Year				
Item	1995	1994	1993	1992	1991
Services and application product revenue					
Telecommunications firms	$205.2	$120.6	$77.8	$61.2	$32.4
- Percent change from previous year	70%	55%	27%	89%	3%
Financial services institutions	$131.3	$91.5	$59.9	$57.1	$49.7
- Percent change from previous year	43%	53%	5%	15%	(6%)
Federal government agencies	$95.8	$87.5	$91.6	$89.8	$75.2
- Percent change from previous year	9%	(4%)	2%	19%	19%
State and local government and education	$95.9	$81.6	$65.9	$59.9	$52.5
- Percent change from previous year	18%	24%	10%	14%	11%
Other corporate clients	$33.3	$27.6	$26.4	$27.5	$36.6
- Percent change from previous year	21%	5%	(4%)	(25%)	11%
Subtotal	$561.5	$408.8	$321.6	$295.5	$246.4
Reimburse expense revenue	70.9	51.1	$42.4	$37.0	$38.0
Total	$632.4	$459.9	$364.0	$332.5	$284.4

- In the financial services institution market, 1995 services and products revenue increased 43% compared to 1994, due principally to build-ups in business with clients who started projects in the second half of 1994. Business with non-U.S. clients accounted for approximately 28% ($37 million) of the revenues of this market.

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For 1996, AMS expects service and product revenue from this market to increase at rates in line with the company's overall revenue growth.

- In the federal government market, 1995 services and products revenue increased 9%. Business with U.S. clients decreased from $87.2 million in 1994 to $82.4 million in 1995. As expected, revenue from foreign government defense agencies was $13.4 million, up significantly from $0.3 million in 1994. AMS expects service and product revenue in this market to increase approximately at the same rate during 1996.

- In the state and local government and education market, 1995 services and products revenue increased by 18% over 1994. Increases were fueled by several large contracts with state taxation departments seeking to make substantial improvement in collecting delinquent taxes. AMS expects revenue from this market to increase during 1996 at rates in line with the increase in the company's overall service and product revenues.

- Services and products revenue from other corporate clients increased 21% over 1994. The largest contributor to the 1995 increase and projected 1996 increase is in AMS' business with health care institutions, where 1995 revenues exceeded $13 million.

Interim Results

Revenue for the three months ending March 31, 1996 reached $181.4 million, a 34% increase over $135.8 million for the same period in 1995. Net income reached $6.6 million, compared to $4.9 million for the same period a year ago.

Service and products revenue increased in all market segments, led by telecommunications (increasing 51%), state and local government and education (increasing 41%), and financial services (increasing 34%).

Market Financials

A three-year summary of AMS' source of revenue is shown on the following page.

AMS has supplied complex systems solutions for 41 of the 50 largest U.S. banks; all top ten retail banks; four of the top five Canadian banks; five of the 10 largest insurance companies; four of the five largest energy firms; 100 federal civilian and defense agencies; more than 50 of the Fortune 100; over 200 state, city and county governments, school districts, colleges and universities; and telecommunications carriers.

AMS' target markets for its products and services include the following:

- The 300 largest banks and other large financial services firms
- Civilian and defense government agencies
- Over 250 of the largest state agencies and local governments
- Over 15 of the largest local education agencies
- The 50 most complex research institutions and universities
- The 300 largest four-year colleges and community colleges
- The 150 largest energy firms
- The largest global telecommunications firms
- The largest pharmaceutical companies

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American Management Systems
Three-Year Source of Revenue Summary

	Fiscal Year		
Target Market	1995	1994	1993
Service and Product Revenue:			
Telecommunications firms	32%	26%	21%
Financial services institutions	21%	20%	17%
Federal government agencies	15%	19%	25%
State and local governments and universities	15%	18%	18%
Other corporate clients	5%	6%	7%
Reimbursed expense revenue	11%	11%	12%
Total*	100%	100%	100%

** Differences due to rounding.*

Geographic Markets

Approximately 75% of AMS' 1995 revenue was derived from the U.S. and 25% from international sources (including export sales).

A three-year summary of geographic sources of revenue is shown below.

American Management Systems
Three-Year Geographic Source of Revenue Summary
($ Millions)

	Fiscal Year					
	1995		1994		1993	
Geographic Market	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
U.S.	$462.4	73%	$367.8	80%	$311.2	85%
International (a)	170.0	27%	92.1	20%	52.8	15%
Total	$632.4	100%	$459.9	100%	$364.0	100%

(a) Includes export revenue of approximately $98.6 million in 1995, $39.6 million in 1994, and $19.5 million in 1993.

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Employees

As of December 31, 1995, AMS had approximately 5,400 employees, including 4,849 exempt staff and 551 support staff.

During 1995, AMS hired 1,800 new consultants, including 340 in Europe.

The company currently has approximately 6,000 employees.

Key Products and Services

AMS' services and products revenue is recognized as follows:

- For large professional services contracts, AMS generally contracts either on the basis of reimbursement of costs plus a fixed fee, a fixed or ceiling price for each phase, unit rates for time and materials used, or for services sold at unit prices. In most cases, AMS receives monthly or per-deliverable progress payments.

  - Most of AMS' revenue is from projects performed under cost-plus contracts, or under fixed- or ceiling-price contracts in which AMS recognizes revenue based on the percent of work completed. Many of AMS' projects require six or more months to complete.

  - In September 1990, AMS was awarded a license by the Carnegie Mellon University Software Engineering Institute (SEI) for the Software Process Assessment methodology. The license enables AMS to offer software assessment as an additional service to its clients.

- Revenue from licenses for off-the-shelf packaged applications, for which delivery has occurred, is recorded at the time the contract is signed, less an amount approximately equal to costs required to complete the contract, which is later recognized on a percent-of-completion basis.

  - AMS is committed to IBM's AD/Cycle application development strategy and is working with IBM to develop versions of its applications for IBM's System Application Architecture (SAA).

  - AMS has made a major commitment to improving the productivity and quality of its work for clients using its Life-cycle Productivity System (LPS), a proprietary combination of third-party and AMS-developed applications. The LPS methodology covers all the areas that an organization needs to establish business objectives, to identify whether application packages or other reusable applications can meet most objectives and to determine system adaptations to meet specific business and technical needs.

  - AMS' CORE 2000 Foundation Software is an integrated suite of reusable building blocks for designing, developing and implementing business systems. CORE 2000 uses leading-edge technologies such as client/server, object technology, advanced user interfaces, distributed data, and open systems.

  - Software applications available from AMS are presented in Exhibit B.

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Exhibit B

AMS Applications Software Products

Application	Description	Number Installed	Operating Environment
Consumer Financial Services			
CreditLine			
- Automated Credit Application Processing System (ACAPS)®	Customer credit application processing system	80	IBM 43XX, 30XX, ES/9000
- BureauLink®	Credit bureau request processing	95	IBM 43XX, 30XX, ES/9000
- Advanced Consumer Lending System (ACLS)	Loan processing system	22	IBM 43XX, 30XX, ES/9000
- Computer Assisted Collection System *Plus* (CACS*Plus*)	Collection management system	190	IBM 43XX, 30XX, ES/9000, AS/400
- Behavior Scoring	Risk management decision support	1	IBM 43XX, 30XX
- STRATA™	Decision management	New	IBM 370, PS/2
- Collateral Asset Tracking System (CATS)	Integrates accounting, analysis, and custody functions	1	*Database Server*: Sun Sparc20 UNIX, Oracle 7.1; *Client Side*: PC, Windows 3.1, PowerBuilder
Collateral Analysis System	Reviews and analyzes customers' collateral documents on site and on the road	1 (as part of CATS)	(see CATS)
Custodial Services System (CSS)	Facilitates storing, tracking and fee assessments of customer-held mortgages	1 (as part of CATS)	(see CATS)
- Encounter	Customer-focused, risk-based credit granting system		OS/2, UNIX, AMS' CORE 2000
- Collections Management Systems (CMS)	Organizes and schedules collections activities	40	VSAM
Claims Processing			
- QuickStart for Data Entry™	OCR/ICR and image enabled application for data entry of medical, hospital, and dental claim forms	4	*Client/server*: Windows 3.1, Windows 95, NT, Novell and UNIX servers; Sybase, Oracle, ODBC

(continued)

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Exhibit B (cont.)
AMS Applications Software Products

Application	Description	Number Installed	Operating Environment
Corporate Banking			
Letter of Credit System (LCS)	Letters of credit, reimbursements, Banker's acceptance and purchase order processing	29	IBM 9370, 43XX/0S/MVS, IMS; OS/2; PC MS-DOS; AT&T UNIX System V
Customer Entry System (CES)	Customer interface to LCS	20	IBM 43XX/OS/MVS, IMS; PC MS-DOS; OS/2
Collection Processing System System (CPS)	Automation for clean and documentary collections	18	IBM/OS/MVS, VSAM, IMS; PC MS-DOS; OS/2
Secured Electronic Main System (SEMS)	Bank and customer message interface	9	IBM 9370, 43XX/OS/ MVS, CICS, VSAM, IMS
ITM Telecommunications Module	SWIFT, cable/Telex and fax interfaces	16	IBM 9370, 43XX/OS/ MVS, VSAM, IMS; OS/2
AMS TradeLine	Letters of credit and collections processing for international banks	24	IBM OS/2 V1, MVS, MVS/XA/ESA, OS/2
AMS TradeLine/Client Server™	Graphical user interface to TradeLine	5	OS/2; AT&T UNIX System V
AMS Access	Interactive customer interface architecture	3	OS/2, Windows
Investments Industry			
Securities Lending & Borrowing System	Securities lending and borrowing for debt and equity	(In devel.)	UNIX, Client/server
Government Systems			
AMS ADVANTAGE® Series			
- ADVANTAGE Financial™	Integrated suite of products for government financial management—budgeting, accounting, treasury, material, operations management	200+	IBM 390, MVS, VSE; IBM RS/6000, AIX; HP 9000, UX
- ADVANTAGE HR™	Integrated suite of products for government payroll and human resource management	50+	IBM 390, MVS, VSE; IBM RS/6000, AIX; HP 9000, UX
- ADVANTAGE Revenue™ RS/6000	Integrated tax administration applic., including taxpayer ID, returns, processing, revenue accounting, correspondence, audit*, enforcement* (*standalone modules available)	10	IBM 390, MVS (only Collections); IBM AIX; HP 9000, UX; Windows NT

(continued)

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Exhibit B (cont.)
AMS Applications Software Products

Application	Description	Number Installed	Operating Environment
Education Systems			
AMS ADVANTAGE® Series			
- ADVANTAGE Financial™	Integrated suite of products for local and higher education financial management, including budgeting and accounting, treasury, material, and operations management	70+	IBM 390, MVS, VSE; IBM RS/6000, AIX; HP 9000, UX
- ADVANTAGE HR™	Integrated suite of products for local and higher education payroll and human resource management, including benefits, position control, and applicant tracking	20+	IBM 390, MVS, VSE; IBM RS/6000, AIX; HP 9000, UX
Telecommunications Industry Systems			
TieLine	Customer contact systems for fixed-wire operators		IBM 370, 43XX, 30XX; MVS/ESA, IMS/DB/DC
- CAMS	Customer Account Management System	6	IBM 370, 43XX, 30XX; MVS/ESA, IMS/DB/DC
- MPS	Message Processing System	7	IBM 370, 43XX, 30XX; MVS/ESA, IMS/DB/DC
- SOMS	Service Order Management System	2	IBM 370, 43XX, 30XX; MVS/ESA, IMS/DB/DC
- UP	Usage Pricing	5	IBM 370, 43XX, 30XX MVS/ESA, IMS/DB/DC, UNIX
Mobile2000	Customer management and billing system for wirefree operators	3	IBM 3090, MVS/ESA, DB2, CICS, ES/9000
Spectrum2000	Customer management and billing system for wireless network operators	2	VAX Alpha, UNIX
Passport	Customer care GUI system that interfaces to wireless network operator's legacy billing system	1	SUN Solaris, UNIX
Provis	Standalone commissions system for the wireless network operator	1	SUN Solaris, UNIX

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AMS has six Knowledge Centers, each of which is a community of AMS people with expertise in AMS' core disciplines.

- Leveraging existing knowledge, the Knowledge Centers enable project teams to share and advance knowledge, experience, methodologies, tools, techniques, and technologies to deliver products and services to clients.

- AMS has Knowledge Centers for Advanced Technologies, Business Process Renewal, Systems Development and Information Technology Management, Organization Development and Change Management, Decision Analytics, and Client Relationship and Project Management.

In the discussion that follows, AMS' products and services will be described in relation to the company's target markets.

Telecommunications

AMS provides professional services and applications to large local telephone companies, interexchange carriers, international carriers and cellular telephone companies. Services and application revenue from this market reached $205.2 million in 1995, a 70% increase over $120.6 million in 1994.

- Applications (see the exhibit) support order processing, message processing, billing, customer care, accounts receivable and collections.

- About 63% ($129 million) of telecommunications' 1995 business was international. The unit is leading AMS expansion in Europe. Initiatives include graphical user interfaces, client/server, distributed processing, utilization of object-oriented technology, additions of Spectrum2000 the GSM version, and expansion of domestic functionality with NYNEX.

- Initiatives include joint development of a credit risk management system with BellSouth; international opportunities with Dutch PTT and Telia AB (Sweden); and transforming to industry standard, advanced building-block architecture.

- AMS is developing a common customer care and billing system for a consortium of PTT Telecom Netherlands, Telia AB, and Swiss Telecom PTT.

AMS has implemented versions of its TieLine applications for companies such as AirTouch, Alberta Government Telephones, ALLTEL, BellSouth, Cellnet, Contel, Mannesmann Mobilfunk, NewVector, Pacific Telecom, Sprint, Stentor, and U S WEST.

Wireless

Mobile2000 is a customer management and billing system for the cellular telephone industry, jointly developed by AMS and NYNEX Mobile Communications.

AMS markets and supports Mobile2000 worldwide and provides professional consulting services.

- AMS is implementing Info-2000, a comprehensive customer management and billing system, at Bell Atlantic NYNEX Mobile. The system is the foundation for Mobile2000.

- In October 1995, AirTouch Communications announced the development and implementation of Passport, a GUI front-end interface to AirTouch's existing customer care and billing system, PRISM. Passport was designed to enable reengineered business processes in AirTouch's call centers. AMS

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is now marketing Passport to other mobile communication carriers.

- In February 1995, AMS was awarded a $10 million contract to develop a customer service and billing system based on Mobile2000 for Radiomovil DIPSA S.A. (Telcel), the leading cellular telephone service provider and operator of the only nationally integrated wireless network in Mexico. The system was successfully implemented in March 1996.

- AMS has developed and implemented customer care and billing systems for many other of the world's leading cellular network operators, including SNET Cellular, Airtel (Spain), Belgacom (Belgium), Mannesmann Mobilefunk (Germany), Telecel (Mexico), and Telecel (Portugal).

Financial Services (Banking and Insurance)

AMS provides business and information management consulting and system development services and, as part of those services, also provides several packaged applications to large international banks and to U.S. money center and regional banks and insurance companies.

- Services and products revenue from this segment were $131.3 million in 1995, a 43% increase over $91.5 million in 1994.

- Financial industry clients include all of the top 10 U.S. banks, five of the six major Canadian banks, five of the 10 largest U.S. insurance companies, seven leading securities firms, and three of the top five brokerage firms. In Europe, clients include the top five banks in Germany, the three largest Belgian banks, the three largest Swiss banks, and four of the top 10 banks in the U.K. In Australia, three of the top five banks are AMS clients, as are two of the top five finance companies. Additional clients include more than 150 other banks and consumer finance companies around the world.

AMS consultants assist in all phases of system planning and project management, including strategic systems planning, business process redesign, business-system concept definition, software evaluation, risk management consulting, credit and behavior scoring model development and implementation, custom system design, system implementation, packaged system customization, operations and efficiency analysis, and training documentation.

- AMS' strategy for the finance industry is to accelerate growth in the areas of risk management (consumer and corporate), customer relationship management, technology (client/server, imaging), and business transformation.

- The target market for AMS' consumer credit management applications and services is organizations that extend credit to consumers and businesses, including financial institutions, retailers, telecommunications firms, government agencies, health care providers, and utility companies.

- For global wholesale processing services, the target market is the leading U.S. and international financial institutions. In the area of wholesale banking, AMS is assisting banking clients to connect electronically with their major customers.

In March 1996, AMS and The Bank of Montreal announced they would codevelop an interactive lending decision system for mortgages, credit cards, and student lines-of-credit through the World Wide Web.

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In August 1995, AMS announced the implementation of its AMS TradeLine/Client Server trade services platform at Comerica Bank. Comerica has also partnered with AMS to develop Comerica Gateway, a treasury management tool for corporate customers using Windows-based software and graphical user interfaces.

Other AMS clients in the financial services area include Bank of America, Wells Fargo Bank, Bayerische Vereinsbank, American Express, AT&T, Banc One, Bank of Montreal, Barclays Bank, Barnetts Bank, the Royal Bank of Scotland, and Citibank.

In the area of insurance, AMS specializes in operations reengineering and underwriting systems for life insurers. The firm served as integrator for Mutual of New York's CLUES expert underwriting system. In addition, AMS worked with Mutual Benefit Life in developing a new business environment.

- AMS has been exclusively designated a "preferred integration partner" by the Lincoln National Corporation, a vendor of expert underwriting systems to the life insurance industry.

- Other clients include Provident Insurance, Equitable, PNC, KeyCorp, and Aetna.

- AMS has an alliance with AICorp, a provider of expert system development software, to provide training and consulting services to insurance companies.

Federal Government

AMS provides professional services, processing and systems operations services to federal government civilian and defense agencies. Services and products revenue from this market was $95.8 million, a 9% increase over $87.5 million for 1994.

- Service and product revenue from U.S. federal civilian agencies was $55.3 million in 1995, compared to $40.6 million in 1994, $54 million in 1993, $51.6 million in 1992, and $44.9 million in 1991.

- Service and product revenue from federal defense clients was $63 million in 1995, compared to $32.5 million in 1994, $37.6 million in 1993, $38.2 million in 1992, and $30 million in 1991. In this shrinking overall market, AMS management believes modest growth can be obtained by targeting specific niches (intelligence, depot consulting, surface ship maintenance, health care).

Defense Agencies—Professional services are provided to all major Army, Navy, Air Force and Marine Corps organizations in the areas of information systems and technology applications. AMS also provides services in support of logistics and maintenance engineering; activity-based costing; industrial operations improvements and business process reengineering; total quality management implementation services; and environmental systems.

- Information systems work includes consulting and systems development for executive decision support systems, strategic systems planning, EDP acquisitions, support, quality assurance, independent verification and validation (IV&V), and life-cycle management documentation support. Projects include distributed processing, information engineering/information systems architectures, the installation of LANs and UNIX-based systems, and the application of document imaging and expert systems.

- In the field of engineering and logistics support for Navy surface ships, key projects include: devising new

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maintenance procedures based on condition of equipment, employing automated systems for test and diagnostic functions, and analyzing trade-offs between maintenance priorities and available resources.

- AMS is also involved in projects to improve headquarters and field logistics management functions, including the development of decision models and performance standards for maintenance, supply, and other logistics elements.

- AMS has provided technical, functional, engineering and management support to help reengineer the business processes of the U.S. Navy's shipyards. AMS is now designing, developing, and implementing the reengineered business processes and the technology infrastructure to support those processes.

- Under a subcontract with Science Applications International, AMS is providing systems engineering technical assistance to the Center for Information Management in the Defense Information Systems Agency office. The five-year contract has a potential value to AMS of between $12 million and $15 million.

- In April 1995, AMS was awarded a contract with the Office of Assistant Secretary of Defense for Health Affairs, potentially worth more than $320 million over five years, to build and support information systems for U.S. military medical facilities worldwide.

- As part of its niche strategy for growth, specific initiatives include the following:

  - AMS is providing strategic, operational, and systems consulting for depot operations. AMS has won $44 million in contracts for naval depots through 1997 and is targeting other DoD services through the Joint Logistics Systems Command. AMS is also expanding maintenance consulting into the nuclear utilities market, with four under contract.

  - AMS is providing a range of information consulting and financial systems to national intelligence agencies. AMS has provided strategic, technical, and systems consulting for Navy surface ships and has won a $57 million contract through 1997.

  - AMS is expanding into closely related industries, providing facilities management systems to utilities and universities to improve plant maintenance.

Civilian Agencies—AMS currently provides professional services to over two dozen federal civilian agencies under various basic ordering agreements, requirements-type contracts, and ADP schedules.

- Services span the full system development life cycle, from systems planning and technology assessment through requirements analysis, design, development, and implementation. AMS also performs general management consulting assignments, provides quality improvement consulting and training, and furnishes independent validation and verification services.

- Advanced methodologies applied for civilian agencies have included Joint Application Design (JAD) techniques, information engineering, business process redesign, and computer-assisted software engineering.

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- Key technology initiatives include distributed, client/server financial management systems, client/server administrative systems, and reengineering of business processes and workflows, including integration of image technology in administrative and programmatic workflows and client/server tools for performance measurement and cost management.

- Areas of specialization include office automation, telecommunications, financial accounting, payroll/personnel, regulatory operations, and administrative applications.

AMS' Federal Financial System (FFS), a large-scale financial accounting application for federal agencies, has been implemented in 38 agencies.

- Recent extensions to the FFS product line include a microcomputer-based version for local site financial accounting, the development of a new module for managing relocation and moving expenses, and expanded budget preparation capabilities.

- New FFS clients added in 1995 and 1994 include the U.S. Department of Veterans Affairs, the U.S. Department of Housing and Urban Development, and the Library of Congress.

- AMS and Digital jointly market FFS accounting software for Digital VAX systems to the federal government.

AMS provides systems operations services to several agencies, including developing and operating systems customized to federal agency requirements. AMS also participates in the GSA teleprocessing services program, under which agencies can purchase processing services from information services vendors.

State and Local Government / Education

AMS provides systems integration services, application solutions, and professional services to state and local governments, local school districts, and colleges and universities. Services and products revenue from this market reached $95.9 million in 1995, an 18% increase over $81.6 million in 1994.

- Services and products revenue from state government clients was $46 million in 1995, compared to $35 million in 1994, $22 million in 1993, $13.4 million in 1992, and $12.1 million for 1991. Key growth areas for 1995 included human services and child support, state revenue and tax collection, and state departments of transportation projects.

- Services and products revenue from local government clients was $28.4 million in 1995, compared to $27 million in 1994, $25 million in 1993, $22.2 million in 1992, and $20.6 million for 1991. Key growth areas for 1995 included client/server-based financial and human resources projects.

- Services and products revenue from education clients was $17 million in 1995, compared to $14 million in 1994, $15 million in 1993, and $22.4 million in 1992. Key growth areas for 1995 included client/server-based financial and human resources products for local school districts and higher education.

- Services and products revenue from Canadian federal and provincial governments was $4.7 million in 1995, compared to $6 million in 1994, $3.4 million in 1993, and $2 million in 1992.

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Ongoing projects in this market include 17 statewide financial systems, 41 state agency systems, 6 of the top 19 cities, 15 of the top 50 counties, 11 Canadian Federal Ministries, 8 of the top 100 large school districts, and 15 of the top 150 major universities.

Services and products are marketed to state and local governments and local education agencies for financial, human resources, and tax management applications.

- In November 1995, AMS began development of an automated statewide information system for the Rhode Island Department of Children, Youth and Families. During 1994 and 1995, AMS was also selected for major new projects in child/welfare, child support and other human services program areas with 11 new clients, including the States of Connecticut, Arizona, Alaska, Oklahoma, and Ohio.

Systems for colleges and universities focus on financial, human resource, student and alumni, and fund-raising information management systems. During the past 14 years, AMS has served the needs of more than 100 complex institutions in the U.S. and Canada.

- Examples of current and recent clients include Duke University, Indiana University, Johns Hopkins University, Northwestern University, Purdue University, Stanford University, and the University of California at Davis.

Other Market Areas

In June 1995, AMS formed a health care technology services practice to provide a range of services and products for major hospitals, health networks, and managed-care entities.

- The practice offers specialized services in strategic systems planning, document imaging and workflow applications, client/server software development, hospital information systems consolidation, and clinical data integration and access.

- In recent years, AMS has provided information technology expertise to hospitals, state hospital associations, insurers, other commercial health care organizations, a nationwide organ sharing network, and the U.S. Department of Defense managed-care programs.

- AMS' health care projects have included strategic information systems planning and development, decision support systems, customer service applications, groupware-based systems, claims processing applications, financial accounting systems, and pharmaceuticals billing systems.

- AMS also provides two client/server-based health care document imaging solutions using imaging platforms supplied by FileNet Corporation. PatientLink is for patient admitting, patient accounting, and customer service. RecordLink electronically stores, retrieves, and distributes patient information.

- AMS' health care practice reported revenue of $13.3 million in 1995.

- Health care clients include Memorial Healthcare System, Birmingham Hospital, and the U.S. Department of Defense.

AMS has completed over 30 document-imaging projects, including systems integration and studies. AMS has implemented large-scale imaging solutions using hardware supplied by IBM, FileNet,

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LaserData, and other vendors. These projects have been performed for government agencies, financial services and insurance firms, public utilities, hospitals, and transportation companies.

Since 1972, AMS has provided processing services to dozens of trade associations and membership organizations, including the Association of Flight Attendants, the National Alliance of Business, and the AARP. Membership accounting, billing, payroll, and related services are provided via the Arlington data center.

Through AMS Training Services and AMS Courseware Developers, AMS provides consulting and training services to Fortune 500/50 industrial companies, banks and insurance companies, and government agencies.

- AMS Training Services specializes in the design and development of applications systems using client/server and CASE technologies and specialized DB/DC software such as IMS, CICS, DB2, and SQL. AMS Training Services also provides system programming, DA, DBA, and JAD technical support.

- AMS' 130-course training curriculum uses interactive machine workshops and addresses such areas as client/server, CASE (ADW, IEF, Excelerator, APS and CSP), Systems Analysis and Design, DB2, SQL/DS, IMS, CICS, ORACLE, SAA, and Expert Systems and Management Training for IS professionals.

- AMS Courseware Developers specializes in the development of custom computer-based training (CBT) and multimedia to enhance the performance of users in large organizations.

Clients

Long-standing AMS clients include the EPA (1972), New York City (1975), the U.S. Navy (1976), United Technologies (1976), Baker and Tayler (1981), American Express (1982), Bank of Montreal (1983), AT&T (1983), Bank of America (1984), Health and Welfare Canada (1985), the State of Massachusetts (1985), Los Angeles County (1986), the IRS (1986), Sprint (1987), and Bell Atlantic (1989).

Marketing and Sales

Marketing is done principally by the senior staff (executive officers, vice presidents, senior principals and principals) and by a small number of full-time salespersons for each large market.

In the government markets, AMS replies selectively to requests for proposals, concentrating on those closely related to previous work done for the same or similar customers.

Alliances

AMS has technology partnerships with a number of vendors, including GRiD Systems, Centura Software Corporation (formerly Gupta Technologies), IBM, Intersolv, Lotus, Microsoft, Neuron Data, Novell, Oracle, ParcPlace Systems, Powersoft, Sybase and Informix Software. Under these partnerships, AMS works with vendors to bring specialized capabilities to client projects (e.g., object-oriented programming, client/server platforms, etc.)

In August 1995, AMS announced a business partner agreement with Lotus under which AMS will offer Lotus Notes products and related application design and development services to large enterprises nationwide.

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AMS also has a number of equity partnerships in specialized firms:

- Advantage KBS, based in New Jersey, is a consulting company specializing in knowledge-based systems. AMS has a 10% equity interest in Advantage KBS.
- Knowledge Systems Corporation, based in North Carolina, provides training and consulting on object technology. AMS has a 14% equity interest in Knowledge Systems.
- Tiburon, Inc., based in California, provides public safety and criminal justice applications. AMS has an approximately 18% equity interest in Tiburon.

Competitors

Major competitors by markets served include the following:

- Financial services institutions—ALLTEL Information Services (formerly Systematics), Fair Isaac, and Shaw
- Federal government agencies—"Big 6" firms and various systems integrators
- State and local government/local education agencies—KPMG, D&B Software, Oracle, and PeopleSoft
- Colleges and universities—Systems & Computer Technology, Oracle, PeopleSoft, the "Big 6," and IBM
- Telecommunications—Andersen Consulting and Cincinnati Bell Information Systems

Assessment

AMS considers its strengths to include the following:

- AMS establishes long standing partnerships with its clients (the company derives more than 87% of its business each year from clients with whom it worked in previous years)
- AMS has a track record for producing genuine results, on time and within budget
- AMS has developed deep business and functional expertise in the markets in which it has chosen to focus
- The company has a sustained growth rate of 20% and has grown for 26 consecutive years

Challenges over the coming year include:

- Recruiting, developing, and retaining highly qualified people (in market conditions which are extremely competitive for skilled people)
- Managing the challenges and risks associated with delivering large, complex projects
- Managing rapid growth without sacrificing margins

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INPUT®

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

April 1996

America Online, Inc.

Chairman & CEO: Stephen M. Case
President & COO: William J. Razzouk
8619 Westwood Center Drive
Vienna, VA 22182-2285
Phone: (703) 448-8700
Fax: (703) 883-1509
Internet: http://www.aol.com

Status:	Public
Employees:	4,000 (2/96)
Revenue:	$394,290,000
Fiscal Year End:	6/30/95

Key Points

- America Online, Inc. is the fastest growing provider of on-line services to consumers. The company offers subscribers a wide variety of services, including electronic mail; news, weather, sports and stock quote information; conferencing capabilities; access to software; on-line classes; home shopping; and access to the services of the Internet.
- In January 1996, America Online announced the appointment of William J. Razzouk to the position of president and chief operating officer, reporting to chairman and chief executive officer Stephen Case.
- For the quarter ending December 31, 1995, America Online's revenues rose 235% over the same period in 1994, primarily due to a 191% increase in the number of subscribers. In February 1996, the company announced that the number of subscribers topped five million, representing a ten-fold increase in just two years.
- In the summer of 1996, America Online will offer Microsoft's Internet Explorer as its default integrated browser; members will be able to download Netscape Navigator as an alternate integrated browser.

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- America Online has made acquisitions over the past year that expand the company's capabilities in the areas of multimedia production tools, enhanced graphics and browsing capabilities for the World Wide Web, and a branded Internet service.

Company Description

America Online offers a range of on-line network and electronic information services, including electronic mail, conferencing, software, computing support, interactive magazines and newspapers and on-line classes.

- The company was founded in 1985 as Quantum Computer Services, Inc.

- In October 1991, the company changed its name to America Online to more accurately reflect the nature of its operations.

- In March 1992, America Online completed an initial public offering of two million shares of common stock, generating net proceeds of approximately $10.3 million. In December 1993, the company successfully completed a second public offering of one million shares of common stock, which generated approximately $62 million in cash.

- In October 1995, America Online approved a 2-for-1 stock split payable on November 28, 1995.

America Online currently has more than five million subscribers in the U.S. and Canada. The number of subscribers has increased significantly over the past year as indicated in the table below:

America Online, Inc.
Subscribers at Quarter-End

Item	3/96	12/95	9/95	6/95	3/95
Number of subscribers	+5,000,000	4,500,000	3,714,000	3,000,000	+2,000,000

Operations/ Structure

America Online is organized into four divisions, each with a clear focus, that establish a central and defining leadership position for America Online in the worldwide market for interactive services.

- AOL Services Company, headed by Ted Leonsis, is the focal point for building interactive environments.

  - AOL Services oversees the acquisition or generation of the wide variety of content available on AOL, is responsible for member support, initiating the development of on-line programming via its joint ventures, product management, interface design and production, marketing, CD ROM, and the development of new revenue streams via interactive marketing programs and transactional services.

  - This unit supports AOL Greenhouse, a program to fund and otherwise support the creation of on-line interactive content by entrepreneurs, and GNN, America Online's standalone Internet service.

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- AOL New Enterprises, headed by David C. Cole, is the business-to-business component of AOL Services. This group provides tailored, private on-line services for a company's networking communications, distribution, and promotional needs.

- AOL Technologies, headed by Michael M. Connors, is responsible for delivering research, development, network/data center operations, and member support to the other America Online divisions, technology licensees, and joint venture partners. This group is also responsible for support functions, including technical support, billing, and sales.

- AOL International, headed by John L. Davies, is responsible for marketing America Online's products and services to international markets, primarily in Japan, Europe, and Canada.

Ventures

In March 1996, America Online and New Line Television announced THE HUB—a venture that borrows from the concept of cable and broadcast TV with 25 "programs" on 8 "channels" to provide content in the areas of entertainment, arts and culture, relationships, the latest (and strangest), and news.

In April 1995, America Online entered into a joint venture with Bertelsmann, AG, one of the world's largest media companies, to offer interactive services in Europe.

- The joint venture is equally owned by the two companies. Bertelsmann has agreed to contribute up to $100 million to fund the launch of the service, will provide access to its book and music club membership base of more than 30 million members, and will offer its publishing content to the joint venture on a most-favored-customer basis..

- America Online will contribute interactive technology and management expertise, proprietary software licenses and development services, staff training, and technical support to develop, test and launch the services in Europe.

- The first service, AOL Germany, was launched in Germany in November 1995. France and the U.K. are expected to follow in the first half of 1996.

- As part of the alliance, Bertelsmann acquired a minority equity stake (5%) in America Online, representing an investment of approximately $50 million.

In October 1995, America Online and Capital Cities/ABC announced a joint venture to develop an interactive fashion and lifestyle channel on America Online.

2Market, Inc., a company cofounded and majority-owned by America Online, is an interactive shopping service using on-line and CD ROM communications.

- America Online currently owns 69% of the planned joint venture with Apple Computer and Medior, Inc.

- 2Market offers thousands of products from more than two dozen catalogs.

America Online (as well as a group of other investors) has a minority interest in Preview Media, Inc., a leading seller of travel via television. The alliance will allow Preview Media to create new platforms for travel sales within emerging distribution channels (including commercial on-line services and the Internet), broadening the audience for direct travel transactions.

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Company Strategy

America Online's strategy is to lead the development of a new interactive medium that potentially will to change the way people obtain information, communicate with one another, buy products and services, and learn.

Through the combination of its growing membership base, enhanced look and feel, and ability to program its content to appeal to users, America Online believes it is uniquely positioned to exploit the evolving mass medium for interactive services.

In implementing its strategy, America Online pursues the following initiatives:

- *Invest in growth of its existing service*—America Online plans to continue to invest in the growth of its existing on-line services. It believes it can attract and retain new members by expanding the range of content and services it offers, continuing to improve the multimedia context of its service and building a sense of community on-line. At the same time, by offering access to a large, growing, and demographically attractive audience, together with software tools and services to develop content and programming for that audience, America Online believes it will continue to appeal to content and service providers.

- *Exploit new business opportunities*—America Online intends to leverage its technology, management skills and content packaging skills to identify and exploit new business opportunities, such as the consumerization of the Internet, electronic commerce and entry into international markets.

- *Provide a range of interactive services*—Through acquisitions and internal development, America Online has assembled content development, distribution capabilities, access software and its own communications network to become a full-service, vertically integrated provider of interactive services.

- *Maintain technological flexibility*—America Online recognizes the need to provide its services over a diverse set of platforms. Its software works on various personal computers and operating systems (including Macintosh, Windows 3.xx and Windows 95) and supports a variety of different media, including on-line services, the Internet and CD-ROM. The company intends to adapt its products and services as new technologies become available in the future.

American Online currently generates revenue largely from membership fees, but the company believes that it will receive revenue in the future from other sources as well, including advertising fees, commissions on merchandise sales to consumers and revenues from the sale of production and network services to enterprises.

Financials

America Online's total fiscal 1995 revenue reached $394.3 million, a 241% increase over fiscal 1994 revenue of $115.7 million.

- Net losses of $33.6 million for fiscal 1995 included charges of $50.3 million for acquired research and development (related to the acquisitions of BookLink and NaviSoft during 1995) and merger expenses of $2.2 million associated with the acquisitions of Redgate, Medior, Inc. and Wide Area Information Servers, Inc.

- In the five-year summary that follows, financials have been restated to reflect the pooling-of-interests acquisition of Medior and Wide Area Information Servers during fiscal 1995.

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America Online, Inc.
Five-Year Financial Summary
($ Millions, except per share data)

	Fiscal Year				
Item	6/95	6/94	6/93	6/92	6/91
Net service revenue	$358.5	$101.0	$38.5	$26.2	$19.5
Other revenue	35.8	14.7	13.5	12.5	10.6
Total	$394.3	$115.7	$52.0	$38.7	$30.1
• Percent change from previous year	241%	123%	34%	24%	N/A
Income (loss) before taxes and extraordinary items	$(18.5) (a)	$6.4	$2.3	N/A	N/A
• Percent change from previous year	(389%)	178%	N/A	N/A	N/A
Net (loss) income	$(33.6) (b)	$2.6	$1.5	$3.8	$1.8
• Percent change from previous year	*	73%	(61%)	111%	N/A
Earnings (loss) per share	$(0.99)	$0.07	$0.05	$0.17	$0.09
• Percent change from previous year	*	40%	(71%)	89%	N/A

(a) Includes charges of $50.3 million for acquired research and development associated with the acquisition of BookLink and NaviSoft.

(b) Includes merger expenses of $2.2 million.

On-line services revenue increased 255% over fiscal 1994 primarily due to a 289% increase in revenue from IBM-compatible subscribers (with a 273% increase in subscribers) and a 196% increase in revenue from Macintosh subscribers (with a 143% increase in subscribers).

The average monthly on-line service revenue per subscriber increased from $15.00 in fiscal 1994 to $17.10 in fiscal 1995.

Other revenue, consisting primarily of new media and interactive marketing services, data network services, multimedia and CD ROM product services, and development and licensing fees, increased 150% due to data network revenue and multimedia and CD ROM product service revenues from companies acquired during fiscal 1995.

Interim Results

Revenue for the six months ending December 31, 1995 reached nearly $447 million, a 235% increase over $133.3 million for the same period in 1994.

- Net income for the period was $328,000 and includes charges for amortization of goodwill of $3.4 million and expenses for acquired research and development of $17 million. For the prior period, net losses of $37.2 million included $42.8 million of charges for acquired research and development and merger expenses of $1.7 million.

On-line services revenue increased 248% due to a 191% increase in the number of subscribers.

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- The average monthly on-line service revenue per subscriber for the six months ending December 31, 1995 was $17.85, up from $16.04 in the six months ending December 31, 1994.

Market Financials

Virtually 100% of America Online's fiscal 1995 revenue was derived from consumers in the U.S. and Canada.

Through its venture with Bertelsmann, the company has launched interactive services in Germany, with plans to expand to France and the U.K. during 1996.

The company intends to expand its services to include Japan through a joint venture with one or more Japanese partners.

Geographic Markets

As previously stated, 100% of America Online's revenue is derived from the U.S. and Canada.

America Online has offices in Vienna (VA), Boston (MA), Jacksonville and Vero Beach (FL), Tucson (AZ) and Hillsborough (CA).

Acquisitions

In February 1996, America Online acquired Johnson-Grace Company for approximately 1.6 million shares of America Online common stock. The acquisition will be accounted for as a pooling of interests.

- Headquartered in Newport Beach (CA) with approximately 70 employees, privately held Johnson-Grace develops data compression technologies. These technologies, known as ART, allow publishers to create more engaging interactive content that includes graphics, streaming audio and slide shows on the Web and commercial services.
- America Online plans to broadly license ART to strategic partners and content developers across the Internet. Johnson-Grace SDK (Software Developers Kit) will also be available to software application companies that wish to include support for the ART format in their applications.
- Johnson-Grace will operate as a subsidiary of America Online.

In September 1995, America Online acquired Ubique, Ltd. for approximately $14.6 million in cash and stock.

- Ubique, Ltd. is an Israeli company that offers real-time interaction and joint navigation for the Internet. Ubique developed Virtual Places, a client/server software architecture that humanizes the Internet's World Wide Web by allowing people to virtually meet and interact.
- The acquisition is expected to strengthen America Online's Internet offerings by enhancing and expanding its existing live on-line interactive communication for both its consumer on-line service and its new Internet brand service (GNN, or Global Network Navigator).

In June 1995, America Online acquired Global Network Navigator (GNN), a subsidiary of O'Reilly & Associates, Inc., for approximately $11 million in cash and stock.

- GNN, the first commercial Web publishing site, is one of the most highly trafficked sites on the Web. America Online's new Internet brand combines the content and context of GNN with the InternetWorks Web browser and software suite, Web directories, and search tools.
- America Online's goal is to build a mass market for interactive services. To do so,

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the company must reach out to 93% of the households that don't subscribe to any on-line service. The GNN brand expands America Online's scope and broadens its appeal.

- In addition to building original content and programming for America Online's new Internet brand, GNN will continue to provide a range of advertising-supported free services and is available to anyone who has a Web browser.

- GNN operates as a wholly owned subsidiary of America Online.

In June 1995, America Online also announced it had acquired the WebCrawler search tool and Internet index.

In May 1995, America Online acquired Wide Area Information Servers, Inc. (WAIS) of San Francisco (CA) for approximately 400,000 shares of America Online common stock. The acquisition was accounted for as a pooling of interests. WAIS developed and marketed the WAISserver and WAIS Production Services, which create custom on-line services for publishers.

In May 1995, America Online acquired Medior, Inc. of San Mateo (CA) for approximately 825,000 shares of America Online common stock. The acquisition was accounted for as a pooling of interests.

- Medior provides multimedia production tools and services.

- With the acquisition, America Online will accelerate its role in providing content partners with enhanced multimedia publishing capabilities.

In February 1995, America Online acquired Advanced Network & Services, Inc. (ANS), creator of the Internet backbone, for $35 million in cash and America Online common stock.

- The acquisition included ANS' wholly owned subsidiary, ANS CO+RE Systems, Inc., which provides virtual private data network services, Internet access, network security and related services to major business.

- The acquisition is expected to strengthen America Online's networking strategy to rapidly deploy network capacity from multiple sources.

- ANS now operates as a wholly owned subsidiary of America Online.

In December 1994, America Online acquired two Internet companies that form the nucleus of America Online's Internet Services Company.

- In December 1994, America Online acquired BookLink Technologies, Inc. from CMG Information Services for 710,000 shares of America Online common stock. BookLink developed the InternetWorks interface for Internet viewing/browsing.

- In November 1994, America Online acquired NaviSoft, Inc. for 130,000 shares of America Online common stock. NaviSoft has developed a collection of software products that provide companies with turnkey Internet solutions. These products have been spun off into America Online's GNN service.

In August 1994, America Online acquired Redgate Communications Corporation of Vero Beach (FL) for approximately 447,000 shares of America Online common stock. The acquisition was accounted for as a pooling of interests.

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- Redgate—a new media and interactive marketing services company—also manages multimedia content databases and delivers its content via custom publications, CD ROM, cable, broadband, demand fax, private satellite networks and digital shopping clubs.

- Redgate's partners and customers include Apple Computer, IBM, EDS, BellSouth, U S WEST, Fidelity, Sun Microsystems, Intel, Olivetti, Racal Datacom, Knight-Ridder, Novell, Xerox, Microsoft, Motorola, NYNEX, Prudential, Pacific Bell, Hewlett-Packard and Fairway Technologies.

- Redgate now operates as a wholly owned subsidiary of America Online.

Employees

As of June 30, 1995, America Online had 2,481 employees, segmented as follows:

Marketing	60
Operations	391
Software and content development	624
Customer support	1,283
Corporate and finance	123
	2,481

The company currently has approximately 4,000 employees.

Key Products and Services

America Online offers a range of services, including electronic mail, conferencing, news, sports, weather, stock quotes, software, computing support, on-line classes, and Internet access, as follows.

- A key feature of America Online's services is the ease with which subscribers with related interests can communicate in real-time conferences, through electronic mail and on bulletin boards. These interactive communications facilities allow people to share information or ideas, exchange advice and socialize.

- America Online promotes real-time on-line communication by scheduling conferences or discussions on specific topics. Electronic mail services allow subscribers to send messages to other members' private electronic mailboxes or to nonsubscribers via fax, U.S. mail or an international electronic mail gateway. Public bulletin boards allow subscribers to share information and opinions on subjects of general or specialized interest.

- America Online supports a variety of software platforms, hardware devices and conduits for delivery of its services. Software platforms include Windows, DOS and Macintosh. The service is available on personal digital assistants (PDAs). In addition, the company supports TCP/IP and is participating in early cable trials using cable as the conduit into PCs and has announced future support of ISDN and wireless.

The range of services offered by America Online is summarized in Exhibit A and includes the following fourteen major departments:

- *Today's News*—Up-to-the-minute news, business news, sports and entertainment news from more than 20 national and international wire services is provided, including news from Reuters, UPI and Business Wire. Members can get updated local weather information and download national weather maps.

- *Personal Finance*—With StockLink, members can keep track of stock and option prices listed on various exchanges such as NYSE and NASDAQ, and maintain an

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updated portfolio. Other services include Morningstar, Vanguard, Investor's Network, PC Financial Network, and Tax Forum.

- *Entertainment*—News and reviews on television shows, ABC Online, MTV Online and Hollywood Online are featured. Members can access news about recording artists and download music in America Online's MusicSpace. This department also includes book and movie reviews, horoscopes, trivia, soap opera summaries, Online Gaming Forums, LaPub (a "virtual pub") and Center Stage, a virtual Theater District where members can chat real-time with the stars.

- *Travel*—Subscribers can plan travel using information found in The Traveler's Corner, hosted by Weissman's Travel Reports; book airlines, hotels and rental cars through easySABRE; browse through travel information with ExpressNet; and share travel experiences and adventures in The Travel Forum. Information is also provided about golf resorts, bed and breakfasts throughout the country, and travel advisories.

- *MarketPlace*—This department offers a range of shopping services and brand name products. Members can make purchases through the Global Plaza, which includes products ranging from car accessories to jewelry. They can also order groceries and pharmacy items and have them delivered to their home. America Online provides members with on-line catalog shopping through 2Market, which features goods and services from leading catalogs and retailers. Consumer Reports on-line is also available to guide the on-line shopper.

- *Computing*—Subscribers can access close to 200,000 public domain or "shareware" software programs that can be downloaded for personal use. They can also get assistance on computing questions from more than 250 PC and Mac vendors who maintain technical support areas on the service, including software libraries, message boards, product information and news about their company. Developers are available to answer questions through conferences or bulletin boards.

- *People Connection*—The service features a list of member-created "real-time" chat rooms on a variety of topics. Other features include Center Stage, a "virtual Theater district"; The Gallery, which allows members to post their own images; the Games Parlor, which includes a schedule of on-line member games; and a Games and Entertainment newsletter.

- *The Newsstand*—More than 60 magazines and newspapers on a variety of special-interest topics are provided, ranging from *Car & Driver* to *Windows Magazine*. Other publications include: *Chicago Online*, *San Jose Mercury Center*, *@Times* (offered through *The New York Times*), *TIME Online*, *OMNI Online*, *COMPUTE*, *Disney Adventures*, *Flying Magazine*, *Elle*, *Business Week*, *Spin* and *Seventeen*.

- *Clubs & Interest*—America Online's service provides a collection of more than 50 special interest clubs and affinity groups, including The Better Health & Medical Forum, The Career Center, The Cooking Club, Environmental Forum, The Grandstand, Wine & Dine Online, AARP and others. Message boards and chat rooms are located in the forums so members can communicate with others who have similar interests.

- *Education*—On-line members can participate in on-line classes, visit the Library of Congress and the Smithsonian, and read *National Geographic*. This area

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also offers The Parent's Information Network, The Teacher's Information Network and other resources of information, including a Career Center.

- *Reference Desk*—Members can search more than 60 information databases ranging from the Bible to the Internet. The Reference Desk includes Miriam Webster's dictionary and Compton's encyclopedia.

- *Kids Only*—America Online provides news, sports, encyclopedia searches, computer games, computer art information, various clubs, reviews on TV books and movies, and talk with other kids.

- *Sports*—Sports information is provided in the areas of sports news, current events, fantasy sports leagues, DataTimes Sports Reports, college teams, and NFL football.

- *The Internet Connection*—America Online created the Internet Center to make the Internet's resources more accessible and easy to use for America Online subscribers.

  - The Internet Center features graphical icons to provide simple navigation through the complexities of the Internet.

  - Members can currently browse the World Wide Web, send and receive unlimited amounts of mail through the Internet, participate in all available Usenet newsgroups, search the WAIS and Gopher databases, learn about upcoming features (Telenet & FTP) and participate in discussions about netiquette and other topics in the message board area.

In addition to the content currently available on its on-line service, America Online continues to add informative content through its strategic alliances with information providers as well as through joint ventures with major media companies.

To further stimulate the development of new content, America Online has created the America Online Greenhouse to fund the development of new programming by entrepreneurs. To date, America Online has funded the development of approximately 15 new on-line content developers.

Pricing is based on monthly subscriptions, which are automatically renewed each month; fees are electronically charged to credit cards or debited from checking accounts until a subscriber requests cancellation.

- During fiscal 1995, the average monthly net service revenue per paying subscriber was approximately $17.10, up from $15.00 in fiscal 1994.

- The standard monthly membership fee is $9.95, which includes five hours of access per month. The hourly fee for usage beyond that included with membership is $2.95.

Internet Access and Service

America Online's goal is to consumerize the Internet by providing simple access to and use of the Internet for members of the America Online service and for users seeking direct access to the Internet.

America Online introduced its Web browser in May 1995, which provides integrated World Wide Web access within the America Online service, and guides members to Web sites based on areas of consumer interest.

America Online has incorporated advanced high-speed compression technology into the browser to improve Web access speed and graphic display performance.

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America Online's GNN service, introduced in October 1995, is aimed at the segment of on-line consumers who seek a full-featured Internet-only solution and publishers interested in enhancing their presence on the Web.

- GNN incorporates technologies acquired during the past year, including the ANS network infrastructure, BookLink browser, NaviSoft personal publishing tools, GNN user interface and WebCrawler search engine.

- GNN has local dial availability in more than 600 cities.

- Pricing for GNN provides consumers with free, unlimited usage for the first month. Thereafter, the monthly fee is $14.95 for 20 hours of daytime or evening use, with additional hours at $1.95.

Multimedia and CD ROM

Medior, acquired in May 1995, provides multimedia production tools and services. Medior's production studio handles all aspects of interactive content development and design, including research and development, engineering, quality assurance, design and implementation of screen interfaces, 3-D texturing and video, and production services.

2Market offers a hybrid CD ROM and on-line-based interactive shopping service that features goods and services from numerous catalogs and retailers, as well as a one-step connection to the America Online service.

America Online plans to develop additional hybrid CD ROM/on-line content offerings that bring together multimedia presentation and on-line connectivity.

Access and Delivery of Services

America Online has a variety of networking initiatives to redefine the ways in which members access its services.

- The company has contracted with third-party data networks, predominantly Sprint, so that members in cities throughout the U.S. and Canada can dial one of approximately 750 local access numbers to connect to its services.

- The company has launched AOLnet, which is based on a portfolio approach whereby network services are provided by a number of different entities, including Sprint, ANS (acquired by America Online in 1995) and BBN. AOLnet provides members with more reliable, higher speed access and should be easier to expand and upgrade. The ANS backbone network carries daily traffic of more than three billion packets.

- In November 1995, America Online announced AOLGLOBALnet, an international access network for members who travel globally and want to connect to America Online. AOLGLOBALnet is available in more than 130 cities in nearly 50 countries.

- In addition, members in rural areas or members who travel frequently in the U.S. can access America Online through an 800 number.

America Online is investing in developing alternative technologies to deliver its services.

- The company has agreements with several manufacturers of PDAs, including Sony, Motorola, Tandy and Casio, to bundle a palmtop edition of America Online's client software with the PDAs of these manufacturers.

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- America Online is currently participating with Viacom, Comcast, Rogers Cablesystems, TCI Communications, and Cablevision Systems in cable trials to deliver its consumer on-line services to personal computers via cable networks and has announced that it will support the cable modem platforms of Intel, General Instruments, Scientific Atlanta and LAN City.

- In the paging market, America Online has agreements with AT&T Wireless Services and MobileMedia to provide their paging customers who subscribe to America Online with mobile access to certain America Online services.

- America Online has an agreement with Pacific Bell to deliver America Online's service over ISDN connections in Pacific Bell's service area.

Enterprise Tools and Solutions

America Online offers authoring and publishing tools and services for creating World Wide Web content and developing commercial applications to exploit the potential of the Internet.

NaviSoft, acquired by America Online in November 1994, has developed a collection of client/server products, including Web authoring software (NaviPress) and a commercial Web server (NaviServer). The products are available for Windows, Macintosh and UNIX platforms. America Online will also implement and maintain Web sites for third parties through its NaviService service.

Through ANS, America Online designs, develops and operates high-performance wide-area networks for business, research, education, and government organizations. Through this network, ANS delivers Internet, wide-area network, and virtual private data network services to enterprises.

Customer Services

America Online provides on-line support and telephone support services.

Once a customer subscribes, America Online implements retention marketing programs designed to increase customer loyalty and to maximize customer subscription life. These programs include regularly scheduled on-line events and conferences, on-line promotions of new services and additions of new software programs.

Marketing and Sales

The overall goal of America Online's marketing programs is to increase the visibility of the America Online brand and to make it easy for consumers to try its services.

- America Online attracts new subscribers through independent direct marketing programs, such as direct mail, disk inserts and onserts in publications, advertising and a variety of comarketing efforts.

- The company has entered into comarketing agreements with numerous personal computer hardware, software, and peripheral production companies. These companies bundle America Online software with their products.

- America Online has also entered into comarketing agreements with certain of its media partners and with affinity groups and associations to market directly to and cater to the needs of specific audiences.

Alliances

America Online has allied with more than 300 leading hardware and software vendors to develop new technologies, jointly market

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products and provide an efficient on-line source of product support to their customers.

- More than 30 personal computer, software, and modem companies, including IBM, Tandy, Lotus and Microsoft, bundle America Online products with their products.

- More than 300 companies use America Online to provide ongoing technical support for their customers.

America Online has a range of content/marketing relationships with media companies that provide content to America Online's services.

Recent alliances include the following:

- In March 1996, America Online announced an alliance with Netscape Communications whereby America Online will license Netscape Navigator client software technology for use in all of its services.

- In March 1996, America Online announced a technology and strategic partnership with Microsoft and agreed to make Microsoft Internet Explorer the standard, built-in Web browser for its customers. Microsoft will give Windows 95 access to the America Online service via a folder on the Windows 95 desktop.

- In March 1996, America Online announced a licensing and development agreement with Sun Microsystems whereby America Online will license Sun's Java technologies, including the Java programming language.

- In March 1996, America Online and AT&T announced that customers of AT&T WorldNet Service will be able to access and sign up to America Online.

- In March 1996, America Online and Apple Computer formed a strategic relationship focused on the distribution of America Online to Apple customers and development of interactive programming and content by Apple. Apple is discontinuing its eWorld on-line service and both companies have agreed to provide easy access and incentive for eWorld users to begin using America Online. America Online has renewed its commitment for development and innovation on the Macintosh platform with new client software and World Wide Web integration.

- In November 1995, Bertelsmann AG and America Online formed an alliance with Deutsche Telekom whereby the parties will swap equity positions in their respective European on-line ventures. In addition, Deutsche Telekom is expected to make a minority investment in America Online through Bertelsmann's agreement to transfer its option to purchase stock of America Online to Deutsche Telekom.

- In November 1995, America Online and Intuit announced a strategic agreement to jointly provide on-line electronic banking to America Online members.

- In September 1995, America Online and Compaq signed a promotion and distribution agreement that includes America Online as the featured consumer on-line services provider preinstalled on Compaq's newest Presario personal computers targeted at the consumer market.

- In September 1995, America Online's NaviSoft unit and Macromedia announced they will unite Web site development tools and interactive multimedia tools to bring enhanced content to the World Wide Web.

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- In July 1995, America Online announced a partnership with Time Warner Cable to conduct a 500-home broadband trial in Elmira (NY), delivering on-line services over a broadband network.

Competition

Major direct competitors in on-line services include include Prodigy (a joint venture of Sears and IBM), CompuServe, AT&T WorldNet, Microsoft Network, and Internet MCI (a service of MCI).

Internet services competitors include NETCOM On-Line Communications Services, Bolt, Beranek & Newman (BBN), Performance Systems International and UUNET Technologies. Internet client/server software competitors include Netscape Communications and Spyglass.

INPUT Assessment

As interactive on-line services have shifted to graphical user interfaces, traditional competitors like CompuServe and Prodigy have struggled with the shift. Consumer migration to Windows has created a tremendous opportunity for America Online to gain market share.

America Online has also staked out a market position in offering services for access to the Internet. It is also planning to extend its platform to support new conduits such as wireless and cable. These new conduits will extend the delivery of America Online outside the traditional public data network environment.

The proliferation of access devices and conduits for on-line services creates uncertainty for market participants and prospective market entrants. America Online is well positioned as a strategic partner to speed market entrance for media companies seeking to leverage their content.

Powerful companies such as Microsoft and AT&T are entering the on-line services market and the challenge for America Online will be to leverage its current subscriber growth and alliances with the media companies.

America Online must add system capacity to assure that its subscribers can readily access the network.

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INPUT®

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

January 1997

American Software, Inc.

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Atlanta, GA 30305
Phone: (404) 264-5296
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AMERICAN SOFTWARE®
THE SUPPLY CHAIN MANAGEMENT COMPANY™

Status:	Public
Employees:	592 (1/97)
Revenue:	$77,557,085
Fiscal Year End:	4/30/96

Key Points

- American Software provides enterprise-wide Supply Chain Management™ business applications software and associated support services for a range of IBM and compatible mainframe, midrange, Windows, and UNIX open client/server systems.
- Supply Chain Management—the business model of the future—allows customer orders, inventory levels, purchase orders and other key information to flow automatically from one business to another, shortening cycle times, reducing inventory, enhancing customer service and loyalty, and increasing quality, productivity, profitability, and return on investment.
- In January 1997, American Software announced the formation of Logility, Inc., a wholly owned subsidiary for its Supply Chain Planning (SCP) open, client/server solutions, its fastest growing business.
- In March 1996, American Software purchased a manufacturing planning product (Production Scheduling Advisor), further enhancing its SCP product line. The company has also Internet enabled SCP.
- American Software has acquired a majority ownership in Intellimedia Commerce, Inc., a venture providing Internet business

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applications and corporate home page design and support.

Company Description

American Software develops, markets and supports multiplatform enterprise-wide Supply Chain Management applications software products across a wide range of industries.

- The company's product line encompasses integrated business applications in the areas of supply chain planning, warehouse management, manufacturing, purchasing and customer order processing, and financial control.

- The company also provides customer education and training, consulting and custom development professional services, and systems operations (outsourcing).

Organization and Structure

American Software is organized into the following divisions/units:

- Midrange Division
- Client/Server Division
- Customer Services
- Outsourcing Services (AmQuest)
- Professional Services
- Alliance Programs
- International Operations

- AmQuest™, Inc., based in Atlanta (GA), provides outsourcing, transaction processing, and electronic commerce-related services.

- AMEDIA, Inc., based in Atlanta (GA), is a wholly owned subsidiary providing CD ROM technology.

- ASI Properties, based in Atlanta (GA), manages American Software's various properties.

- Distribution Sciences, Inc., based in Des Plaines (IL), is a wholly owned subsidiary providing transportation management software.

- Intellimedia Commerce, Inc., based in Atlanta, is a wholly owned subsidiary focusing on developing, hosting, and maintaining Internet-based solutions for both business and consumer markets.

- The Proven Method, based in Atlanta (GA), was formed as a wholly owned subsidiary in April 1995 to provide contract consulting services to information systems organizations.

- Logility, Inc. is a wholly owned subsidiary formed in January 1997 to manage SCP solutions.

  - The new company is a dedicated organization that develops, markets, sells, installs, and supports new solutions exclusively for the SCP market.

  - American Software is also evaluating the possible sale of a portion of the new company to the public.

In order to move its sales and client support services closer to its customers, American Software has organized into seven global areas—Mid-America, Northeast, Southern, Western, Canada, Europe/Middle East/Africa, and Asia-Pacific. World headquarters are in Atlanta (GA). Area headquarters and associated support offices are as follows:

- Northeast U.S.—Headquartered in Tarrytown (NY), with additional offices in Braintree and Wayne (PA)

- Southern U.S.—Headquartered in Atlanta (GA), with additional offices in Irving (TX) and Raleigh (NC)

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- Mid-America U.S.—Headquartered in Rosemont (IL) with an additional office in Eden Prairie (MN)
- Western U.S.—Headquartered in Costa Mesa (CA) with an additional office in Tiburon (CA)
- Europe/Middle East/Africa—Dual headquarter offices in London (England) and Paris (France)
- Asia-Pacific—Headquartered in Singapore
- Canada—Headquartered in Markham (Ontario)

American Software also has agents in Belgium, Germany, Ireland, Italy, the Netherlands, Switzerland, Turkey, Bahrain, India, Kuwait, South Africa, Singapore, Australia, Japan, and Malaysia.

Company Strategy

American Software's long-range strategy is to extend the functionality of supply chain management to help speed information, communication, and production along each component of the supply chain.

American Software's goals are to:

- Establish American Software as the world leader in Supply Chain Management solutions
- Capture technology leadership by providing solutions that customers want on the platforms they need
- Strengthen its commitment to customer satisfaction around the globe
- Put the right people in the right places
- Create strong global alliances
- Provide solid leadership with financial success

Strategies the company is implementing to achieve these goals include:

- Refocusing and restructuring sales and client support services closer to customers so as to be more responsive to their needs
- Reengineering its software solutions to open, client/server platforms to provide customers with a range of hardware platforms
- Using model-driven I-CASE tools and object-oriented technology
- Developing business alliances with such vendors as Synon, Oracle, Sybase, HP, IBM, Sequent, and Big 6 and other consulting firms

Financials

American Software's fiscal 1996 revenue was $77.6 million, a 2% decrease from fiscal 1995 revenue of $79.4 million. Net losses were $9.7 million in fiscal 1996, compared to net losses of $6.7 million in fiscal 1995.

A five-year financial summary is shown on the following page.

A three-year source of revenue summary is also shown on the following page.

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American Software, Inc.
Five-Year Financial Summary
($ Millions, except per-share data)

	Fiscal Year				
Item	4/96	4/95	4/94	4/93	4/92
Revenue	$77.6	$79.4	$94.2	$106.8	$113.1
• Percent change from previous year	(2%)	(16%)	(12%)	(6%)	11%
Income (loss) before taxes	$(12.8)	$(11.3)	$(11.7)	$6.7	$27.9
• Percent change from previous year	(12%)	3%	(275%)	(76%)	4%
Net income (loss)	$(9.7)	$(6.7)	$(6.6)	$5.1	$18.6
• Percent change from previous year	(46%)	(2%)	(229%)	(73%)	6%
Earnings (loss) per share	$(0.44)	$(0.30)	$(0.30)	$0.23	$0.80
• Percent change from previous year	(47%)	--	(230%)	(71%)	7%

American Software, Inc.
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	4/96		4/95		4/94	
Product/Service	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Software license fees	$24.1	31%	$20.8	26%	$31.1	33%
Maintenance services	22.8	29%	$22.6	28%	21.6	23%
Professional services	20.4	27%	$26.8	34%	35.5	38%
Systems operations	10.3	13%	$9.2	12%	6.0	6%
Total	$77.6	100%	$79.4	100%	$94.2	100%

- Software license fee revenues increased 16% to $24.1 million during fiscal 1996. Supply Chain Management license fee revenue grew 151% during the year. During the last six months of the year, license fees for the older technology products declined sharply.

- Service revenue, which consists of consulting and custom programming professional services and outsourcing revenues, decreased 15% to $30.7 million due to a 24% decrease in professional services. This decrease was partially offset by a 12% increase in outsourcing revenue.

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- Maintenance revenue increased 1% to $22.8 million. The growth in maintenance has slowed over the last three years due primarily to the decrease in software license fees that serve as the source of new maintenance customers.

A three-year summary of source of software license revenue by operating platform is shown below.

	Software License Revenue ($ Millions)		
Hardware Platform	4/96	4/95	4/94
Mainframe	$6.6	$5.2	$16.3
Midrange	6.5	7.3	7.7
Client/server	11.0	8.3	7.1
Total	$24.1	$20.8	$31.1

Interim Results

Revenue for the six months ending October 31, 1996 was $38.1 million, a 10% decrease from $42.4 million for the same period in 1995. Net losses were $759,000, compared to net income of $778,000 for the same period a year ago.

- Overall license fee revenue declined 19% to $12.4 million, with newer client/server products accounting for 60% of total license fee revenue.

- Services revenue declined 5% to $15 million, due to continued declines in consulting and customization revenue resulting from a steady decrease in older technology software sales (largely mainframe software).

- Maintenance revenues declined 10% to $10.7 million, due to reduced license fees.

Market Financials

American Software markets and supports its Supply Chain Management applications software products to a range of users, including manufacturers of building materials, chemicals, consumer goods, electronics, food products, pharmaceuticals, pulp and paper, steel, and textiles, as well as retail and wholesale traders, financial institutions, the health services industry, petroleum producers, public utilities, and the transportation industry.

Geographic Markets

Approximately 86% of American Software's fiscal 1996 revenue was derived from the U.S. and 14% from international sources.

A three-year summary of geographic sources of revenue appears on the following page.

Acquisitions

In March 1996, American Software acquired the Production Scheduling Advisor software group from Stone & Webster Advanced Systems Development Services, Inc. (ASDS).

- American Software has integrated Stone & Webster's Production Scheduling Advisor (PSA) finite capacity and material planning system into American Software's Supply Chain Planning demand planning and replenishment system.

- PSA will also continue to be sold as an independent product.

In January 1996, American Software purchased 60% of Intellimedia Commerce, Inc. for $850,000. Intellimedia builds and maintains systems for commerce on the Internet. The acquisition expands American Software's capacity to strengthen supply chain relationships via the Internet.

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American Software, Inc.
Three-Year Geographic Source of Revenue Summary
($ Millions)

	Fiscal Year					
	4/96		4/95		4/94	
Geographic Market	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
U.S.	$67.0	86%	$69.2	87%	$77.8	83%
International (a)	10.6	14%	10.3	13%	16.4	17%
Total	$77.6	100%	$79.5	100%	$94.2	100%

(a) Primarily from customers in Canada, Europe, Australia, and Asia

In March 1995, American Software acquired 30% of the equity of Txbase Systems, Inc. American Software received marketing rights for the Txbase suite of software products and has the option to increase its equity position to 50% of Txbase.

- Txbase is an Ontario, Canada-based provider of client/server applications software.
- Txbase software products include manufacturing, distribution, and financial modules developed for open systems architecture using (principally) Sybase relational database technology.

Employees

As of April 30, 1996, American Software had 610 full-time employees, segmented as follows:

Sales and sales support	108
Marketing	18
Customer support and professional services	180
Product development and technical support	264
Accounting and administration	40
	610

The company currently has approximately 592 employees.

Key Products and Services

American Software's solutions focus on the entire supply chain, from raw material through final consumption.

Software Products

American Software's products are designed to be used either individually or in combination to assist customers in forecasting and inventory management, purchasing and materials control, and order processing and receivables control.

- Products are available primarily for UNIX (HP 9000, IBM RS/6000, and other UNIX), Windows (Windows 3.1, Windows NT, and OS/2), and IBM midrange systems (AS/400) platforms. Software is also available for IBM and compatible mainframes.
- The products are written in various standard programming languages used for business applications software, including ANS COBOL, COBOL II, Micro Focus COBOL, and C and many have both on-line and batch capabilities.

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- The company has integrated PCs as workstations or clients into its products.

American Software products are summarized in the exhibit on the following page. These applications support the three major business process areas necessary to manage today's supply chain—planning, execution, and measurement.

- Planning systems focus on having the right product at the right place at the right time. Demand and Replenishment Planning is central to this function.

- Execution systems facilitate the actual movement of products and information through a supply chain. Customer Order Fulfillment, Procurement, Manufacturing, and Transportation Management solutions are tightly integrated and EDI enabled to enhance the supply chain communication process.

- Measurement functions analyze and control financial and operational performance. This process is supported by many of American Software's products, including its Financial Management applications.

- The company's K2 product line encompasses Year 2000-enabled solutions, including software, maintenance renewals, and customization services.

Recently released tools/products include the following:

- Resource ChainVoyager™ is an Internet-based collaborative SCP tool that enables collaborative forecasting and replenishment using the Internet. By using Netscape Navigator or Microsoft Explorer, customers, suppliers, distributors, and other supply chain trading partners can access Resource Chain Voyager's capabilities to track demand and manage replenishment.

- The Flow Manufacturing™ system for just-in-time manufacturing environments is available for UNIX and AS/400 systems and features enhanced functionality that allows it to bond a product to specific customer demand while eliminating unnecessary activities related to costing, scheduling, and production.

- WarehouseP&RO is a client/server managed warehouse system especially suited for multisite warehouses, especially in the manufacturing, distribution, and utilities industries. It automates all aspects of a system-managed warehouse and contains support for automated bar coding and RF technologies.

- American Software has Internet enabled its SCP solutions to link departments, customers, and suppliers and create interactive information sharing to reduce cycle time and synchronize production on demand.

American Software's Supply Chain Management solution includes a variety of application templates for integrating technologies such as radio frequency scanners, interactive voice response, optical character recognition, image processing, and EDI. ADC-P&RO is a client/server-based product that integrates data collection applications such as bar coding, automated storage/retrieval systems, automated item pickers, electronic scales, program logic controllers, and shop floor devices.

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Exhibit

American Software Products

Application Area/Product Name	Application Area/Product Name
Supply Chain Planning	**Warehouse Management**
- Demand Forecasting	- Receiving
- Distribution Requirements Planning	- Setup and Administration
- Inventory Planning	- Product Storage
- Manufacturing Planning	- Picking and Shipping
- Continuous Replenishment	**Financial Control**
- Event Planning	- General Ledger and Budgeting
- Internet Voyager™	- Accounts Receivable
Purchasing & Customer Order Processing	- Accounts Payable
- Inventory Control and Accounting	- Capital Project Accounting
- Purchasing	- Fixed Asset Accounting
- Material Request	- Continuing Property Records
- Item Information Management	**Transportation Management**
- Bid (Request for Quotation)	- Preshipment Planning®
- Customer Order Processing	- Carrier Select™
Manufacturing	- Match Pay™
- Master Scheduling	- Base Rate®
- Material Requirements Planning	**Applied Technologies**
- Bill of Material	- Automated Data Collection
- Capacity Planning	- Electronic Data Interchange
- Production Order Status	- Interactive Voice Response
- Route and Work Center Maintenance	- Executive Information System
- Shop Floor Control	- Decision Support Systems
- CMAT	- Image Processing
- Flow Manufacturing	- Optical Character Recognition
	- Knowledge-Based Systems

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The company also offers the AMSOFT™ family of productivity tools.

Professional Services

American Software's Client Services include application business consulting, technical consulting, education and training, project management, and ongoing support services.

The Proven Method, a wholly owned subsidiary, provides contract consulting services to information systems organizations. The company supplies additional resources to augment current staff and provides technical talent for organizations that have minimal experience with new technologies. As companies make the transition from legacy systems, The Proven Method can also provide technical resources to maintain the legacy system while developing new systems.

Outsourcing

American Software provides systems operations services to approximately 20 clients on terms of up to five years. These services are now provided by the company's AmQuest, Inc. subsidiary.

Clients

Software license clients include Lone Star Gas, GTE Telephone, The Clorox Corporation, Timex, Fast Food Merchandisers, UPS, Advanced Transformer, Indiana Gas, British Telecom, Sigma Aldrich, Porsche Cars, Jacksonville Electric Authority, Bausch & Lomb, United Design Corporation, Procter & Gamble, Chiquita Brands International, Inc., Lockheed Martin, Warner-Lambert Company, Sears Roebuck and Co., Michelin Tire Corporation, American Standard, Nestle, Acromed, Springs Window Fashions Division, and Jerome Foods.

Outsourcing clients include Oglethorpe Power Corporation, Borg-Warner Security Corporation, and Dixie Yarns.

Marketing and Sales

American Software sells its products directly to users through its sales staff of 105 persons located in six areas worldwide—Mid-America (23), Northeast (18), Southern (31), Western (10), Canada (4), Europe (10), and Asia-Pacific (9).

American Software is continuing a program begun in 1988 to develop a network of sales agents to support sales internationally.

American Software also has joint marketing arrangements with a number of other software and hardware manufacturers under which each party seeks to market its own products or services in conjunction with products or services of the other party.

Alliances

In October 1996, American Software's SCP unit signed a partnership agreement with PeopleSoft.

- Each company will actively promote PeopleSoft and SCP products as complementary supply chain solutions. This agreement includes mutual referral of sales leads, catalog and other collateral listings, user group demonstrations, and other marketing activities.

- SCP software (forecasting, demand planning, inventory planning) will supplement PeopleSoft's Enterprise and Production Planning products to provide an end-to-end supply chain solution, from forecasting to manufacturing.

In August 1996, American Software expanded its list of international business partners by signing Real Software (NI)

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Limited to provide supply chain planning and management solutions in Ireland.

Intellimedia Commerce, Inc. is a joint venture formed in 1996 between American Software, Intellimedia Sports, and Cox Enterprises. Its focus is on developing, hosting, and maintaining Internet-based solutions for both business and consumer markets.

Rijnhaave American, Inc. is a joint venture company formed in July 1995 between American Software and Rijnhaave Information Systems to provide information systems consulting, network configuration and management, transaction processing, systems support, and other data center services. This venture allows both companies to consolidate efforts and expand the scope of their facilities management capabilities.

American Software is a member of Oracle's Cooperative Applications Initiative program. American Software's SCP solutions are being integrated with Oracle Cooperative Applications.

American Software and systems integrator Syntegra (U.K.) have a strategic alliance whereby Syntegra will incorporate American Software products as part of an integrated solution to multinational and large national corporations.

American Software also has joint marketing/partner agreements with a number of software and hardware vendors, including Cognos, Computer Associates, Data Management Services (Damas), Distribution Logistics & Management, Hewlett-Packard, IBM, Information Builders, Intermec Corporation, Interactive Images, LX, Seagull Software, Synon, Systecon, Syntellect, Txbase Systems, Telxon, Deloitte & Touche, Price Waterhouse, Ernst & Young, EDS, Sterling Software, Software AG of North America, Sequent Computer Systems, and Sybase.

Competitors

Major competitors include Geac Computer (D&B Software), Computer Associates, SAP, Manugistics, and J.D. Edwards.

Assessment

American Software's strengths include:

- Supply chain management expertise
- Flow manufacturing products
- Introduction of client/server products
- Customer base
- Financial strength

The company's main challenge is to overcome its declining software license revenue and return to profitability.

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INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

November 1996

Ameritech Corporation

Chairman & CEO: Richard C. Notebaert
30 South Wacker Drive
Chicago, IL 60606
Phone: (312) 750-5000
Internet: http://www.ameritech.com

Status:	Public
Employees:	65,790 (9/96)
Revenue:	$13,427,800,000
Fiscal Year End:	12/31/95

Key Points

- Ameritech, one of the seven regional telecommunications companies formed by the breakup of the Bell System in 1984, provides communications and network services to both commercial and residential markets.
- Ameritech currently has 19.6 million access lines, 2.3 million cellular customers, and more than one million paging customers. The company currently boasts 386 lines per telephone company employee.
- In October 1996, Ameritech opened an office in Brussels (Belgium), establishing a headquarters for its European operations and an expansion center for new business ventures.
- In September 1996, Ameritech formed a strategic alliance with FirstService Corporation by purchasing the security monitoring assets of Pre-Alert Security Systems, Inc. and certain security monitoring accounts of Intercon Security Ltd., a unit of FirstService Corporation.
- In March 1996, a consortium of which Ameritech is a member became the strategic partner of Belgacom S.A., Belgium's national telecommunications company.

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- In March 1996, Ameritech changed the name of The National Guardian Corporation to SecurityLink℠ from Ameritech. National Guardian was acquired by Ameritech in October 1995, expanding the company's customer base to 340,000 throughout the U.S. and Canada.

- During 1995, Ameritech launched a new managed services venture with IBM to pursue opportunities managing desktop computing and communications.

- In September 1995, Ameritech, The Walt Disney Co., and four other partners entered into a joint venture called americast™ to provide an alternative to traditional cable TV.

- In 1995, Ameritech created Ameritech New Media, Inc., a separate subsidiary to build and operate standalone cable TV systems.

- In April 1995, Ameritech announced Ameritech Dedicated Internet Access Service to deliver fully managed, dedicated Internet access service.

- During 1995, Ameritech continued its expansion into international markets through a newly awarded privatization in Belgium, a larger stake in MATAV of Hungary, and a new venture with Chinacom.

Company Description

Ameritech is a leading global supplier of full-service communications and advanced information services. The company provides telephone, cellular, paging, data, leasing, and advertising services as well as systems integration, systems operations, and network services.

During 1994, Ameritech became the first regional company to completely replace rate of return regulation with price cap regulation throughout its region.

- The various state price cap regulation plans allow Ameritech to keep what it earns and provide the company greater flexibility to vary prices to meet the needs of a competitive marketplace.

- In 1995, the FCC approved pure price cap regulation for Ameritech, enabling it to operate without regulatory limits on earnings in any jurisdiction.

- In 1996, the passing of the Telecommunications Act of 1996 set mechanisms for local competition and allowed Ameritech to offer long-distance services to cellular customers.

Organization and Structure

Ameritech has formed a business-unit organization based around customer needs and formed a five-state network organization to serve the business units and their customers.

- The company has consolidated all of its activities under the Ameritech name.

- The functions of the business units overlap the legal entities that form the infrastructure of the company.

- The products and services of all of the companies are marketed under the Ameritech name, but the company's five landline telephone subsidiaries—Ameritech Wisconsin, Ameritech Indiana, Ameritech Illinois, Ameritech Michigan, and Ameritech Ohio—remain responsible within their respective service areas for providing phone and other telecommunications services, subject to regulation by the FCC and the five respective state public utility commissions.

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In August 1995, the Ameritech business units were further aligned within three business sectors. Each sector is headed by a senior vice president who reports to Dick Notebaert. The sectors and associated vice presidents include:

- *Communications and Information Products*, headed by Barry K. Allen, includes Advertising Services, Information Industry Services, Long Distance Industry Services, Pay Phone Services, Communications, Regulatory Function, and Five State Entities.

- *Consumer and Business Services,* headed by Andrew S. Patti, includes Consumer, Custom, Enhanced, Small Business, and Product Management Services. This sector accounted for approximately 59% of Ameritech's 1995 revenue.

- *Worldwide Network Systems* includes Cellular, New Media Enterprises, Network, and Security Monitoring Services.

Ameritech's business units and unit presidents include the following:

- *Advertising Services*, headed by Peter J. McDonald, provides directory and electronic advertising opportunities to local, regional, and national businesses throughout the Great Lakes region and serves as a directory and marketing consultant.

- *Information Industry Services*, headed by Neil E. Cox, provides a range of services to more than 4,200 network and information providers that buy services from Ameritech and use them in their product offerings to business and residential customers. Customer segments include Independent Telephone companies, Wireless, Competitive Access Providers, Independent Pay Phone Providers, Cable TV, Database, Multimedia, Telemanagement, Interactive Services, Monitoring, and Control Systems Integration.

- *Long Distance Industry Services,* headed by Karen S. Vessely, provides telecommunications products and services to more than 150 interexchange carriers whose primary business is the provision or resale of long-distance services. Services range from access to the local network to SONET rings.

- *Pay Phone Services*, headed by Ellen M. Gardner, provides voice, information, and multimedia pay phone communications products.

- *Ameritech Communications, Inc.*, headed by Steven P. Nowick, provides toll calling and long-distance services to approximately 30% of Ameritech's cellular customers. The unit is prepared to offer long-distance services and packages of services to home and business telephone customers upon approval from regulators under the Telecommunications Act of 1996.

- *Consumer Services*, headed by Mitchell Wienick, is Ameritech's largest business unit, providing approximately 32% of the company's overall 1995 revenue. This unit provides communications services to 11.1 million households in its five-state region. Services include telephone lines, customer premises equipment, and call management services such as Caller ID and Call Waiting.

- *Custom Business Services*, headed by Gregory Q. Brown, provides specialized services to approximately 200 of Ameritech's largest customers, which typically average 5,000 access lines and have multiple in-region and out-of-region locations. Services include data solutions, telephone lines, customer premises equipment, electronic commerce, and desktop managed services.

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- *Enhanced Business Services,* headed by Ronald L. Blake, assists Ameritech's 62,000 midsize to large business, health care, education, and government customers in developing and installing information and communications solutions. This unit provides telephone lines, customer premises equipment, call management services, and data services.

- *Small Business Services,* headed by Timothy Cawley, provides communications links for more than one million small businesses, which typically have 11 or fewer access lines. Services include telephone lines, customer premises equipment, and call management services.

- *Product Management,* headed by Thomas J. Reiman, promotes increased use and penetration of existing Ameritech services, develops new products, and continually enhances established services.

- *Cellular Services,* headed by John E. Rooney, serves the wireless communications needs of approximately 2.3 million cellular customers and more than one million paging customers in seven midwestern states and Hawaii.

- *Ameritech New Media Inc.,* headed by Deborah L. Lenart, is Ameritech's subsidiary that is building and marketing americast™, Ameritech's enhanced cable TV service which includes 80-90 channels of cable TV programming. Future services may also include home shopping, banking, and interactive services.

- *Network Services,* headed by Thomas E. Richards, addresses improvements in quality, customer service, and cost performance for Ameritech business units and customers.

- *Security Monitoring Services,* headed by Stephen E. Pazian, designs, installs, monitors, and maintains electronic security services marketed as SecurityLink℠ from Ameritech to more than 360,000 homes and businesses in the U.S. and Canada. Services include burglar and fire alarm systems, closed-circuit cameras (CCTV), and electronic card access.

- *Capital Services,* headed by R. Scott Horsley, provides value-added financing to approximately 5,000 business and government customers in all 50 states.

- *International,* headed by Walter S. Catlow, leverages Ameritech's existing telecom competencies and resources to enter attractive international markets, pursues new international communications opportunities, and manages existing international businesses in New Zealand, Hungary, Poland, Norway, Germany, and China.

A three-year summary of source of revenue by business unit is shown on the following page.

Company Strategy

Ameritech's three-part strategy for growth is as follows:

- To be the best full-service communications company, delivering value in communications and information to customers and providing all the services customers want in one stop—including telephone, data, video, cellular, paging, and information.

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Ameritech Corporation
Revenue by Business Unit

	Fiscal Year		
Business Unit	**1995**	**1994**	**1993**
Consumer	32%	33%	33%
Custom, enhanced, and small business	27%	28%	29%
Long distance	14%	16%	17%
Advertising	8%	8%	8%
Cellular, including paging	8%	7%	5%
All other	11%	8%	8%
Total	100%	100%	100%

- Creating new services for customers in high-growth areas of communications, such as long-distance and interactive services. Ameritech's long-term goal is to generate as much as 20% of its revenues from these new services.

- Reaching customers around the world by participating in international privatizations, alliances, strategic investments, and outsourcing.

  - During 1995, Ameritech led a consortium that was selected as a strategic partner for Belgacom S.A., the national telecommunications company in Belgium.

  - The Ameritech alliance more than doubled its investment in the Hungarian telecommunications company, MATAV, in 1995.

Financials

Ameritech's 1995 revenue reached $13.4 billion, a 7% increase over 1994 revenue of $12.6 billion. Net income was $2.0 billion, compared to a net loss of approximately $1.1 billion in 1994, before one-time items.

A five-year financial summary is shown on the following page.

Ameritech management attributes 1995 results to higher communications network usage resulting from:

- Access line and cellular subscriber growth

- Increases in managed network services

- Increases in new products and services, including call management services, customer premises equipment, and security monitoring

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Ameritech Corporation
Five-Year Financial Summary
($ Millions, except per-share data)

Item	Fiscal Year 1995	1994	1993	1992	1991
Revenue	$13,427.8	$12,569.5	$11,864.7	$11,284.7	$10,983.3
• Percent change from previous year	7%	6%	5%	3%	2%
Income before taxes	$3,094.1	$1,741.4	$2,222.5	$1,973.7	$1,656.4
• Percent change from previous year	78%	(b) (23%)	13%	19%	(8%)
Net income (loss)	$2,008	$(1,063.6)	$1,512.8	$(400.4)	$1,165.5
• Percent change from previous year	(a) 289%	(c) (170%)	478%	(d) (134%)	(7%)
Earnings (loss) per share	$3.63	$(1.94)	$2.78	$(0.75)	$2.19
• Percent change from previous year	(a) 287%	(c) (170%)	471%	(d) (134%)	(8%)

(a) Includes one-time gains of $78.7 million ($0.14 per share) related to restructuring efforts and $41.3 million ($0.08 per share) related to exchange of cellular partnership interests.

(b) Includes work force restructuring charges of $728.1 million, pretax.

(c) Includes a one-time charge of $2,234 million ($4.07 per share) from discontinuance of FAS71.

(d) Includes a cumulative charge of $1,746.4 million ($3.26 per share) from a change in the method of accounting for postretirement benefits.

Revenue Analysis by Product/Service

Ameritech segments its revenue according to the following categories of service:

- Local service revenues include basic monthly service fees and usage charges, fees for custom-calling features, public phone revenues, and installation and connection charges.

- Network access revenues are fees charged to interexchange carriers, such as AT&T and MCI, that use Ameritech's local telecommunications network to provide long-distance services to their customers. In addition, users pay flat-rate access fees to connect to the local network to obtain long-distance service. These revenues are generated from both interstate and intrastate services.

- Long-distance revenues are derived from customer calls to locations outside of the local calling area but within the same service area.

- Directory, cellular, and other revenues include telephone directory publishing, cellular communications, paging services, lease financing, billing and collection services, and telephone equipment sales and installation.

A three-year summary of source of revenue by product/service follows:

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Ameritech Corporation
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	1995		1994		1993	
Product/Service	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Local service	$5,586	42%	$5,337	42%	$5,065	43%
Interstate network access	2,254	17%	2,218	18%	2,118	18%
Intrastate network access	562	4%	612	5%	623	5%
Long distance	1,457	11%	1,456	12%	1,401	12%
Directory, cellular, and other	3,569	26%	2,946	23%	2,658	22%
Total	$13,428	100%	$12,569	100%	$11,865	100%

Interim Results

Revenue for the nine months ending September 30, 1996 reached $11.0 billion, an increase of 11% over revenue of $9.9 billion for the same period in 1995. Net income reached $1.6 billion, a 13% increase over net income of $1.4 billion for the same period a year ago.

Market Financials

Ameritech's revenues are derived cross-industry, including residential and business customers.

Geographic Markets

International investments represented 6.3% of Ameritech' s assets as of December 31, 1995, compared to 5.4% as of December 31, 1994.

- Such investments are accounted for by using the equity method of accounting. Ameritech's allocable share of the operating results of its international investments is included in other income.
- More than one-third of Ameritech's third quarter 1996 earnings growth was generated by the company's international investments.

Acquisitions

In October 1995, Ameritech acquired The National Guardian Corporation, a wholly owned subsidiary of LET Group PLC providing electronic security services.

- National Guardian had 1994 revenues of approximately $215 million.
- This purchase expanded the company's security monitoring customer base to 340,000 throughout the U.S. and Canada, making Ameritech the second largest provider of security monitoring services in the U.S.

In August 1995, Ameritech acquired ABE Marketing, a Central European-based publisher that produces business-to-business directories for the Czech Republic, Croatia, Slovakia, and Slovenia. This acquisition positions Ameritech as one of the

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leaders in European business-to-business directories.

During 1995, Ameritech acquired the remaining 10% of "Wer liefert was?" (Who supplies what?), the leading German publisher of business purchasing guides, in which Ameritech had acquired a 90% interest in 1990.

In December 1994, Ameritech entered the electronic security monitoring industry with the purchase of SecurityLink of Oak Brook (IL). The terms of the acquisition were not disclosed.

- SecurityLink had 1993 revenues of nearly $40 million.
- SecurityLink had approximately 44,000 customers located primarily in the Midwest, including the Chicago, Cleveland, Columbus, and Indianapolis metropolitan areas. It also serves customers in Philadelphia and Washington, D.C.
- Ameritech formed a new subsidiary, SecurityLink℠ from Ameritech, through which to offer its newly acquired security monitoring services.

Employees

As of December 31, 1995, Ameritech had 65,345 employees, a 3% increase over 63,594 employees the previous year.

Employee growth was due primarily to new employees in the cellular, security monitoring, and other operating units. These increases were partially offset by a decrease of about 2,400 employees at the landline communications subsidiaries resulting from work force restructuring that began in 1994.

As of August 31, 1996, the company had approximately 65,790 employees.

Key Products and Services

Landline Telephone Services

Ameritech furnishes a range of advanced telecommunications services, including local exchange, toll service, network access, and telecommunications products to 13 million business, residential, and communications company customers in an operating area comprised of 37 Local Access and Transport Areas (LATAs) in Illinois, Indiana, Michigan, Ohio, and Wisconsin.

As of December 31, 1995, 81% of Ameritech's customer lines were served by digital switches and virtually all its lines had been converted to equal access. As of that date, the company had 1.1 million installed strand miles of fiber-optic cable.

- The number of customer access lines grew by 4.5%, primarily due to the increase in residential fax machines, modems, and other equipment.
- Business lines increased 7.2% to 6.2 million.
- Residential lines increased 3.1% to 12.3 million.

Ameritech's landline subsidiaries provide two basic types of telecommunications services:

- Transporting telecommunications traffic between a subscriber's equipment and the telephone exchange offices located within the same LATA (intraLATA). These services include local exchange, private line, and intraLATA toll services (including 800 and special services for data, radio, and video transport).

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- Providing exchange access service, which links a subscriber's telephone or other equipment to the network of transmission facilities of long-distance carriers, which in turn provides telecommunications service between LATAs (interLATA or long-distance service).

  Ameritech expects to offer landline long-distance service in its five-state region in early 1997, beginning in Illinois and Michigan.

Ameritech also provides directory assistance, local and toll operator services (including collect calls, third-number billing, person-to-person, and calling cards), and offers such digital network services as voice mail, on-line database access, fax messaging, document sharing functions, and videoconferencing for desktop computers.

- In September 1995, Ameritech introduced SmartQuest℠ 800, a bundled call management solution for businesses, providing Caller ID and 800 services, special database software, call adapter, and telephone support.

- Introduced to Chicago and Detroit customers in September 1996, Ameritech's National Directory Assistance service provides local and long-distance numbers across the country without requiring area codes. The company plans to introduce National Directory Assistance to the entire five-state Ameritech area.

Ameritech® Automatic Meter Reading Service permits the reading of customers' gas, electric, and water meters through existing phone lines. The city of Salem (OH) has a 10-year contract with Ameritech for this service.

Through the Ameritech Packet Switch Network provided by Ameritech Ohio, motor vehicle licensing officials in Ohio can access and update all Ohio drivers' licenses and vehicle registration.

Ameritech provides a range of network consulting, integration, and design services to major business, government, and institutional customers.

- Ameritech can integrate voice, data, video-conferencing, and environmental systems, including customer premise equipment, local and long-distance networks, and private networks.

- Ameritech provides custom data connectivity solutions to link customers' operations. *Branch Office Data Connectivity* solutions combine ISDN, frame relay, ATM, and other communications technologies. Ameritech also provides Internet access.

- During 1994, EDS and Ameritech signed a $225 million, seven-year outsourcing contract under which Ameritech is providing maintenance, repair, and upgrades to voice communications systems at more than 300 EDS sites in 41 states.

- Ameritech was awarded a $20 million, five-year contract to maintain Motorola's telecommunications service center.

- Ameritech was awarded a ten-year, $25 million contract with the city of Chicago to support the city's 911 system.

- The State of Michigan has signed a 60-month, $6.3 million master network contract to provide services to state agencies.

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- Ameritech will build a six-node, $5.9 million SONET ring to meet Comdisco customers' disaster recovery needs.

- Ameritech will provide the City Colleges of Chicago with videoconferencing capabilities, including a T-1 network encompassing 15 locations with VTEL video equipment and multiple bridges.

Ameritech provides the following services in support of other network and information providers:

- Through a strategic alliance with Concentric Network Corporation, Ameritech helps local telephone exchange carriers (LECs) to provide Internet access to their rural customers. Ameritech provides a turnkey service, including network design and maintenance, marketing support, and billing solutions, and Concentric provides the Internet connection, host services, software, credit card verification, billing information, and customer service.

- Ameritech provides billing and collection services for several companies, including billing for long-distance services offered by certain long-distance carriers.

- Ameritech's *UltimateLink* program is designed to meet the needs of the long-distance industry for products, high-quality service, and competitive prices. Ameritech is investing $200 million in network infrastructure for SONET-based high-speed switched and dedicated service.

- In an alliance with Paradigm Technology Ltd. of New Zealand, Ameritech is the exclusive marketing and support arm of Transaction Analysis and Processing System (TAPS) for the U.S. telecommunications industry. TAPS is a software product that provides near-real-time usage rate calculations while reducing operating costs.

- New products for third-party providers include:

  - *Cellular Alarm Terminals* provide cellular backup to security systems.

  - Services provided for Personal Communications networks include both network facilities to support PCS and engineering and consulting services.

  - *Control Services Integration* will provide utility customers with control systems that can sense, measure, monitor and control a range of utility functions.

  - *Infochannel* is a multimedia information system used to distribute information to any number of PCs and television units and can be used in hotels, airports, shopping malls, and on cable TV channels.

  - *Interactive Services Platforms* are designed for companies that market information services such as 976 numbers and voice messaging services to customers.

Interactive Services

In April 1995, Ameritech announced seven Internet initiatives:

- Operating a network access point for Internet service providers

  - Ameritech is one of four providers selected by the National Science Foundation in 1993 to offer a network access point (NAP) for the Internet in the U.S.

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- The company will operate its NAP over an ATM switch.

- Offering dedicated Internet access throughout the Ameritech region

- Offering dial-up Internet access throughout the Ameritech region

In March 1995, Ameritech and CCNet, a not-for-profit subsidiary of the Champaign County Chamber of Commerce, entered into a partnership to begin test-marketing two new interactive services in Champaign County (IL): a high-speed Internet Access Service and a home and office communications system that integrates communications and computer functions using the Integrated Services Digital Network (ISDN).

- Offering Internet navigational software through Ameritech Library Services

NetPublisher and WinPAC are two products introduced by Ameritech Library Services to make the Internet easier to access and navigate.

- Partnering to develop the Internet as a tool for electronic commerce

In January 1995, Ameritech joined CommerceNet, a nonprofit consortium of organizations working to build an open Internet-based infrastructure for electronic commerce.

- Partnering with the State of Michigan to use the Internet to enhance education

- Maintaining its own presence on the Internet

Ameritech entered the high-growth electronic security monitoring industry in December 1994 with its acquisition of SecurityLink.

- In May 1995, SecurityLink expanded operations to new and existing customers in the Washington, D.C., Maryland, northern Virginia, and Trenton (NJ) areas by opening two new facilities in Cranbury (NJ) and Beltsville (MD).

- In October 1995 Ameritech expanded its position in the industry with the acquisition of The National Guardian Corporation.

- In March 1996, Ameritech renamed its National Guardian security services SecurityLink℠ from Ameritech, to provide a consistent brand identity and to establish itself as a premier provider of commercial and residential monitored security systems.

- In September 1996, through its Canadian security monitoring subsidiary SecurityLink from Ameritech Ltd., Ameritech entered into a strategic alliance with FirstService Corporation by purchasing the security monitoring assets of Pre-Alert Security Systems, Inc. of Toronto (Ontario).

  - In a separate agreement, Ameritech also acquired certain residential and commercial security monitoring accounts of Intercon Security Ltd., a unit of FirstService Corporation.

  - These agreements with Pre-Alert and Intercon expand Ameritech's reach in the Canadian market by increasing the company's presence in Toronto and forging its entry into Vancouver.

- In November 1996, SecurityLink from Ameritech Ltd. acquired the business of

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Toronto (Ontario)-based Romex Security Systems Inc. This transaction makes the combined operations the largest security services provider in Canada and raised the customer base to more than 360,000 in the U.S. and Canada.

- Ameritech has plans to offer home and business owners remote monitoring and adjustment of heating, air conditioning, lighting, sprinklers, and appliances through "smart home" and "smart office" services.

Through October 1996, Ameritech has finalized 25 cable TV franchise agreements representing access to more than 1.4 million people and 600,000 households, and has launched service in Chicago, Cleveland, Columbus, and Detroit.

- Ameritech is signing up thousands of customers and growing the market by 10% in some areas.

- The company is building a hybrid fiber-coax digital network capable of eventually delivering multicast and interactive services over more than 300 channels.

Ameritech is also pursuing alliances and partnerships that will position it as a key participant in the emerging era of interactive video, exploring a variety of services with different suppliers of traditional cable TV, video on demand, home health care, interactive educational courses, distance learning, interactive games, shopping, and other entertainment and information services.

- Ameritech has invested in Peapod LP, an interactive home grocery shopping and delivery service. Using a personal computer, more than 14,300 customers in the Chicago and San Francisco areas can choose grocery items and schedule home delivery at their convenience. In 1995, Peapod expanded service by 30%.

- Ameritech has a 25% interest in MN Interactive, Inc. which uses on-line links, CD ROM, dial-up connections, and voice mail to provide music previewing, ordering, and delivery of the latest music CDs from major and independent record producers.

- Ameritech also has an equity investment in KidSoft, LLC, a leading brand for quality educational software for kids through on-line and retail channels.

- Ameritech and Random House have expanded their ownership of Worldview Systems Corporation, a supplier of electronic travel and entertainment information.

  - Ameritech and Random House each now own more than 40% of Worldview Systems, with the remainder reserved for the firm's management team.

  - The company's first product, Fodor's Worldview Travel Update, offers customers, via fax, on-line information services, or mail, time-sensitive destination information that complements Fodor's catalog of printed guidebooks.

- In September 1995, Ameritech, The Walt Disney Company, Bell South Corporation, SBC Communications (formerly Southwestern Bell Corporation), and GTE entered into a joint venture named americast™ to develop, market, and deliver traditional and interactive video programming to customers.

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- Southern New England Telecommunications joined the alliance in early 1996.

- The service provides customers in 33 states with an alternative to traditional cable TV, as well as two-way services including home shopping, banking, travel planning, and electronic games.

- This joint venture is headed by Stephen Weiswasser, the newly named CEO, who was formerly with Cap Cities.

• Ameritech has invested $472.5 million in GE Information Services (GEIS), a wholly owned subsidiary of General Electric Company and a leader in the global electronic commerce market.

- The investment is in the form of a four-year interest-bearing convertible debenture which, when legal restrictions are removed, converts into a 30% equity interest in GEIS.

- In 1995, GEIS agreed to provide MATAV, the primary telecommunications provider in Hungary and in which Ameritech owns an interest, with electric data interchange technology, enabling it to offer its business and government sector customers enhanced information management capabilities.

Other information services offered by Ameritech include the following:

• Ameritech processes billing and clinical transactions for health care providers through an integrated system of computer software, hardware, and telephone lines.

- Ameritech's health information network enables doctors, hospitals, pharmacies, laboratories, employers, and others in the health care industry to share clinical, demographic, financial, and claims data.

- In Wisconsin, in partnership with Aurora Health Care of Milwaukee, Ameritech developed the Wisconsin Health Information Network, the world's largest interactive health care information network, used by more than 2,000 doctors, hospitals, insurers, medical labs, and pharmacies.

• Ameritech Library Services provides a range of automated library management systems, serving more than 3,700 libraries throughout the U.S. and 32 other countries.

- Clients include the Library of Congress, The Smithsonian Institute, Yale and Harvard universities, Microsoft Corporation, and the New York Public Library.

- Ameritech also offers products that provide access to information databases and networks, creating virtual libraries.

• In 1995, Ameritech and IBM formed a managed services marketing alliance whereby the companies jointly market integrated voice, data, and video managed desktop services for businesses, providing customers with a single point of contact for managing every aspect of desktop-based communications and computing systems.

• In March 1994, Ameritech entered into a joint venture with BC Systems of British Columbia to form CivicLink℠, which allows on-line access to publicly available government records, such as property titles, court records, liens, and construction permits. CivicLink is currently in operation in Marion County

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(IN), Prince George's County (MD), Los Angeles County (CA), and DuPage, Kane, DeKalb, and Kendall Counties (IL).

- Ameritech and Citibank market a smart phone that is used to pay bills, get stock quotes, transfer money between accounts, order travelers checks, and review balances.

- Confirm & Pay, launched in late 1994, is designed to allow brokerage firms to meet the Securities and Exchange Commission's new three-day trade settlement requirement (T+3) by confirming and settling trades electronically.

Cellular and Other Wireless Services

Ameritech provides cellular and other wireless communications to 2.3 million customers in Illinois, Indiana, Michigan, Missouri, Ohio, and Wisconsin.

- In September 1995, Ameritech began offering cellular service in Cleveland and Indianapolis.

- During 1995, Ameritech's cellular customer base grew by approximately 600,000, a 46% increase over the prior year.

- Subscribers to Ameritech's international wireless joint ventures increased in 1995 to 837,000 from a customer base of 111,000 a year earlier.

- In February 1996, Ameritech began offering long-distance service to its cellular customers. The company demonstrated its capability in the first official call between Chicago and Hamburg (Germany).

- Ameritech has formed strategic cellular partnerships in Poland, Norway, and China and has investments in other cellular providers.

Wireless Packet Data Services, introduced in 1994, provides the mobile data customer with application options to send data over the cellular network.

During 1994, Ameritech became the first cellular carrier in the country to offer its customers the ability to use cellular phones in both North America and Europe. The Ameritech Cellular International Network employs the Global System for Mobile Communications standard.

Ameritech currently provides local and nationwide paging services to customers in Illinois, Indiana, Michigan, Missouri, Minnesota, Ohio, and Wisconsin, using over one million paging units, an increase of 33% over year-end 1995.

- In November 1994, Ameritech won the narrowband personal communications services (PCS) regional license to offer two-way paging in the Midwest.

- In 1997, Ameritech plans to begin building out its system for two-way paging and data services to customers regionwide. The return paging channel will allow users of two-way pagers to acknowledge a page and, eventually, to provide a detailed response.

- In 1995, the company acquired broadband PCS licenses in the Cleveland and Indianapolis major trading areas, covering nearly eight million potential customers. Ameritech currently offers wireless services to customers in Indianapolis and Cleveland through reselling agreements. The company plans to provide facility-based services beginning in 1997.

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Advertising/Directory Services

Ameritech provides directory and electronic advertising to local, regional, and national businesses throughout the Great Lakes region and serves as an advertising and marketing consultant.

Ameritech publishes more than 450 Ameritech PagesPlus® white and yellow page directories in Indiana, Wisconsin, Ohio, and Michigan and, in partnership with Donnelly Directory, in Illinois and northwestern Indiana, with a total distribution of more than 41 million.

Using new audiotex technology, Custom Connect™ audiotex, available 24 hours a day, 7 days a week, provides consumers and advertisers with a range of information opportunities accessible through special phone numbers.

- Consumers can call for up-to-date information including news, sports, and weather, as well as information about specific products and services.
- Advertisers can provide consumers with updated messages about their businesses, such as sales, discounts, and special hours.
- In October 1996, Ameritech began offering advertising space for a new Internet yellow pages service.

Other products include Ameritech Industrial Purchasing Guides®, targeted to buyers of industrial products, and The Ameritech Business Search™ white and yellow page business reference directories, which are also available in CD ROM.

International

Since 1990, Ameritech has invested approximately $2 billion in Germany, New Zealand, Hungary, Poland, and Norway, and has established offices in China and Belgium.

The company provides cellular service in Norway, and publishes business-to-business directories throughout Europe, including in Germany, Austria, Belgium, Switzerland, Luxembourg, the Netherlands, the Czech Republic, Slovenia, Slovakia, and Croatia. It also provides electronic library services in Sweden, the U.K., France, Ireland, Belgium, the Czech Republic, Germany, Luxembourg, the Netherlands, and Slovakia.

In October 1996, Ameritech opened an office in Brussels (Belgium), establishing a headquarters for its European operations and an expansion center for new business ventures.

- The new office will be responsible for Ameritech's European operations, business development, and strategy.
- The office will be headed by Herbert R. Hribar, vice president of Ameritech International and managing director, Ameritech Europe.

In March 1996, Ameritech and its consortium partners Tele Danmark A/S and Singapore Telecommunications Limited (Singapore Telecom) became the strategic partner of Belgium's national telecommunications company, Belgacom S.A.

- The consortium paid approximately $2.5 billion for a 49.9% interest in Belgacom. This is Belgium's largest single investment by an American company.
- Ameritech has a 35% consortium share and an approximately 17.5% interest in Belgacom.

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In August 1995, Ameritech entered into a 25-year joint venture with China Communications System Company Ltd. (Chinacom) to build cellular and wired telephone networks in China.

- The joint venture will provide funding, advanced communications technology, and management consulting to assist China in developing its telecommunications sector.

- The venture will initially build a GSM cellular telephone and wireline switched telephone network for Taiyuan, the capitol of Shanxi province. China Unicom, an authorized carrier, will operate the network.

- Ameritech opened an office in Beijing in early 1995.

In 1995, Ameritech acquired the remaining 10% of "Wer liefert was?" (Who supplies what?), the leading German publisher of business purchasing guides, resulting in a total acquisition of the company. The company now produces and distributes business-to-business directories to more than 70,000 customers in Germany, Austria, Switzerland, Belgium, Luxembourg, the Netherlands, the Czech Republic, Croatia, Slovakia, and Slovenia.

In 1995, MagyarCom, an alliance between Ameritech and Deutsche Bundespost Telekom of Germany, increased its ownership of MATAV, the Hungarian telecommunications company, from 30% to 67%. The Hungarian government owns most of the remaining 33%.

- Ameritech and Deutsche Bundespost Telekom of Germany, Europe's largest communications carrier, are equal partners in MagyarCom.

- MATAV has approximately 1.8 million access lines and a goal to increase to 3 million lines in service by the year 2000.

During 1994, Ameritech announced a Pan-American alliance with six other cellular companies, including ALLTEL Mobile, Bell South Mobility, CommNet Cellular, GTE Personal Communications Services, Radiomovil DIPSA S.A. (Telcel, the carrier for the Republic of Mexico), and Southwestern Bell Mobile Systems, to provide a virtual international network throughout much of the U.S. and Mexico. While roaming in the markets of the alliance, Ameritech customers receive automatic call delivery, home customer care, and competitive roaming rates.

Since September 1993, Ameritech and its partners in NetCom GSM have provided digital cellular service in Norway. In 1992, Ameritech and Singapore Telecom, the government-owned telecommunications and postal operator in Singapore, agreed to acquire an equal interest in NetCom totaling an effective 49.9%.

- In 1995, NetCom's customer base was tripled to 235,000 customers.

- Nationwide coverage by the NetCom system is expected within two years.

Since 1992, an Ameritech consortium has operated the Centertel cellular system in Poland. Ameritech and France Telecom, in partnership with Telekomunikacja Polska S.A., Poland's state-owned telephone company, created a joint venture to build the analog cellular system.

In September 1990, Ameritech and Bell Atlantic purchased Telecom Corporation of New Zealand Limited, New Zealand's state-owned principal supplier of domestic and

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international telecommunications services, including local, long-distance, cellular, satellite TV, and directory services.

- Ameritech and Bell Atlantic each have a 24.8% interest in the company.
- During 1995, New Zealand Telecom's profits increased by 16%.

Marketing and Sales

Ameritech markets its products and services through a direct sales force and through other company authorized dealers.

Competition

Ameritech's major competitors include other access providers, cellular, video, and home security providers, and the other regional Bell operating companies.

The company also faces potential competition from AT&T, MCI Communications Corp., and other long-distance providers that are ready to offer local phone service in various parts of Ameritech's five-state region.

AT&T and McCaw Cellular Communications, Inc. have allied to form expanded cellular markets, creating the possibility of a wireless network with nationwide presence.

Tele-Communications, Inc., Comcast Corp., and Cox Cable Communications are part of a cable company joint venture with Sprint Corporation that plans to offer alternative wireless service.

Assessment

Ameritech considers its strengths to include the following:

- World-class market-based organization/culture
- State-of-the-art, ubiquitous network
- Strong financial position
- Extensive customer relationships

Challenges over the coming year include:

- Successful execution of the company's strategy
- Managing a number of public policy issues, including interconnection, universal service, access charge reform, and long-distance entry

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INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

March 1996

Anacomp, Inc.

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President & CEO: Lang Lowrey III
11550 North Meridian Street
P.O. Box 40888
Indianapolis, IN 46240
Phone: (317) 844-9666
Fax: (317) 848-1360

INPUT LIBRARY

Status:	Public
Employees:	3,600 (10/95)
Revenue:	$591,189,000
Fiscal Year End:	9/30/95

Key Points

- Anacomp is a leading provider of computer output microfilm (COM) micrographics products and services worldwide.
- The company has recently been involved in financial restructuring, including filing Chapter 11 status, as a result of defaults on most of its debt agreements due to cash shortages. The company has also announced a five-year business plan to return the company to profitability.
- In September 1995, Anacomp named Lang Lowrey, the company's president and COO, as Anacomp's new CEO. By mutual agreement, former CEO Louis P. Ferrero left the company effective October 1, 1995.
- In November 1995, Anacomp sold its non-core source document services business for $13.5 million, providing Anacomp with about $12.7 million in debt reduction.

Company Description

Anacomp, founded in 1968, provides COM processing (micrographics services) to more than 8,000 customers through its 45 data service centers nationwide.

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Other products and services provided by Anacomp, which represented 78% of revenue during fiscal 1995, include micrographics systems (the XFP 2000 COM recorder) for users who perform their own data conversions; consumable supplies and equipment for micrographics systems; maintenance services for micrographics equipment; and magnetics storage products, including open reel tape, 3480 tape cartridges and 3490E tape cartridges.

As a result of a withdrawn public offering to refinance certain debts and weaker-than-anticipated results during the second quarter of fiscal 1995, Anacomp did not have sufficient cash to make scheduled principal and interest payments.

- Since May 1995, Anacomp has been continuously engaged in efforts to formulate a restructuring plan to satisfy its various creditors, including developing a new business plan.
- In February 1996, Anacomp announced it had reached agreements with all of its major creditors on a financial restructuring plan to enable Anacomp to emerge from Chapter 11 proceedings filed in January 1996.
- The agreement reduces Anacomp's current debt and accrued unpaid interest and dividends of approximately $454.4 million (including preferred stock) by approximately $179.9 million.
- During this process, Anacomp's business operations will continue as normal.

Company Strategy

As part of its recent restructuring, Anacomp management undertook a planning process to transform Anacomp into a cash-driven business focused on its balance sheet and debt-to-equity ratio. The company has adopted a five-year plan that focuses on:

- Reducing costs by centralizing administrative functions, merging numerous data service centers and offices, and reducing headcount
- Outsourcing or exiting low-margin, non-strategic businesses
- Investing in high-margin products and services that are complementary to the company's core micrographics business

This new plan has resulted in:

- The sale of the Image Conversion Division
- Closure of the Omaha (NE) factory that produced the magnetic media for flexible diskettes
- Discontinued manufacturing of readers and reader/printers
- A company-wide reduction in work force

Anacomp's objective is to protect its highly profitable COM services business, while introducing complementary high-growth services such as compact-disc recordable (CD-R) output, print and mail and archiving. Pursuant to this strategy, Anacomp envisions selling each image it processes up to four times:

- Once to output the image to microfilm or microfiche for safe, long-term storage
- Once to output the image to CD-R for short-term storage and frequent retrieval
- Once to output the image to paper to be mailed directly to the client's customers

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- Once to store the image for a customer at an Anacomp site for archival purposes

To combat declining prices due to competitive market conditions, Anacomp has installed its XFP 2000 COM systems in all of its data centers, increasing the efficiency of COM production. Additionally, Anacomp will upgrade these systems with Anacomp-developed emulation software for IBM and Xerox laser print streams, which expand the potential market for COM services and command higher average prices than other COM output.

Financials

Anacomp's total fiscal 1995 revenue was $591.2 million, down slightly from fiscal 1994 revenue of $592.6 million.

- Net losses of $238.3 million include $136.9 million of special charges (representing a $108.0 million write-off of good will and $28.9 million of costs associated with previous software investments), $32.7 million in restructuring charges and a one-time $29.0 million deferred tax provision.

- Fiscal 1995 operating income before these charges was $41.4 million, compared to operating income of $79.6 million in fiscal 1994. The decrease is largely attributed to lower micrographics margins as a result of lower selling prices; a decline in COM system and supplies sales; higher selling, general and administrative costs; and a change in product mix as relatively less profitable magnetics products represented a greater portion of total sales.

- A five-year financial summary in shown on the following page.

Micrographics services revenue, which accounted for 22% of Anacomp's revenue in fiscal 1995, was level compared to fiscal 1994, despite a 10% increase in volume.

- Approximately 3% of the volume increase was due to the acquisition of the COM services customer base of 14 data service centers of National Business Systems, Inc.

- COM service revenue was adversely affected by a decline in average selling prices reflecting a continuation of market price erosion that Anacomp expects to continue.

Revenue Analysis by Product/Service

Approximately 22% of Anacomp's fiscal 1995 revenue was derived from micrographic services and 78% from other sources.

A three-year summary of source of revenue by product/service appears on the following page.

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Anacomp, Inc.
Five-Year Financial Summary
($ Millions, except per share data)

	Fiscal Year				
Item	9/95	9/94	9/93	9/92	9/91
Revenue	$591.2	$592.6	$590.2	$628.9	$635.4
• Percent change from previous year	--	--	(6%)	(1%)	(3%)
Income (loss) before taxes and extraordinary items	$(203.3) (a)	$15.4	$20.5	N/A	N/A
• Percent change from previous year	N/A	(25%)	N/A	N/A	N/A
Net income (loss)	$(238.3)	$15.0 (b)	$18.6 (c)	$26.9 (c)	$29.2 (c)
• Percent change from previous year	N/A	(19%)	(31%)	(8%)	204%
Earnings (loss) per share	$(5.20)	$0.27 (b)	$0.39	$0.58	$0.64
• Percent change from previous year	N/A	(31%)	(33%)	9%)	220%

(a) Includes special charges of $136.9 million related to a write-off of good will for software investments, a $29.0 million deferred tax provision and $32.7 million in restructuring charges.

(b) Includes a positive cumulative effect of $8 million from a change in the method of accounting for income taxes.

(c) Net income includes extraordinary credits from utilization of tax loss carryforwards of approximately $6.9 million, $8.7 million and $11.1 million for fiscal 1993, 1992, and 1991, respectively.

Anacomp, Inc.
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	9/95		9/94		9/93	
Product/Service	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Micrographics						
- Micrographics services	$132.3	22%	$131.1	22%	$125.2	21%
- Micrographics supplies, readers and readers/printers	190.6	32%	204.5	35%	223.1	38%
- Maintenance services	85.7	15%	89.9	15%	86.8	15%
- COM systems	51.8	9%	58.8	10%	75.9	13%
Magnetics	128.4	22%	98.8	17%	72.7	12%
Other	2.4	--	8.5	1%	6.5	1%
Total	$591.2	100%	$592.6	100%	$590.2	100%

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Market Financials

Anacomp's micrographics services customers include a majority of the Fortune 500 companies, banks, insurance companies, financial services companies, retailers, health care providers and government agencies.

Geographic Markets

Approximately 68% of Anacomp's total fiscal 1995 revenue was derived from the U.S. and 32% from international operations.

- One hundred percent of Anacomp's micrographics revenue is derived from the U.S.

- Anacomp's foreign revenue is derived from micrographics supplies, COM systems, maintenance and computer tape and other magnetic products, primarily in the U.K., Germany, France, Canada and the Benelux countries.

Acquisitions

Anacomp has successfully acquired independent computer output microfilm (COM) data service centers located in attractive markets. Anacomp has acquired 26 service centers and one microforms service center during the past three fiscal years.

During fiscal 1994, Anacomp acquired 16 data service centers or the related customer base (all were incorporated with existing Anacomp service centers), a computer tape products company and the customer base of a micrographics supplies business for a total consideration of approximately $39.1 million.

- Effective January 1994, Anacomp purchased the COM services customer base of 14 data service centers operated by National Business Systems for approximately $14.8 million in cash and Anacomp common stock. All of these operations were incorporated into existing Anacomp data service centers.

- In December 1993, Anacomp acquired two data service centers from First Image Management Company (a unit of First Financial Management Corporation) in markets where Anacomp provides COM services to separate customer bases. These operations were incorporated into existing Anacomp data service centers.

- In May 1994, Anacomp acquired Graham Acquisition Corporation, a computer tape products company, for approximately $19.5 million.

No acquisitions were made during fiscal 1995.

Divestitures

In November 1995, Anacomp sold its Image Conversion Services (ICS) division to Image Conversion Systems, Inc. for approximately $13.5 million.

- The ICS division performed source document microfilm services to approximately 800 customers through 11 centers nationwide. ICS had approximately 300 employees and generated revenue of $21.5 million in fiscal 1995.

- The purchaser, Image Conversion Systems, is a corporation formed by John Messinger, formerly an Anacomp vice president in charge of the ICS division, and Horizon Partners, Ltd., an equity investor.

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- Anacomp had determined that ICS was not strategic to the company's new direction. The sale of this division provided Anacomp with approximately $12.7 million in debt reduction, enables Anacomp to continue marketing these services to its clients, and provides the company with new revenue through the sale of products and services and the leasing of existing space to Image Conversion Systems.

Key Products and Services

One hundred percent of Anacomp's $132.3 million in micrographics services revenue was derived from COM and microforms processing services.

COM and microforms services are provided to more than 8,000 customers nationwide through 45 data centers.

- COM services include the transfer of output directly from magnetic tapes or direct computer transmissions to microfiche or roll microfilm.

- Value-added services provided by Anacomp include Anatrieve customized indexing and retrieval software.

- The typical service contract is exclusive, lasts one year with a one-year automatic renewal period and provides for usage-based monthly fees, subject to increase on 30 days' notice.

- Approximately 75% of Anacomp's micrographics services customers are subject to contracts and more than 95% of such contracts are renewed annually.

In the future, Anacomp plans to generate add-on revenue from various additional customer services, including the following:

- With CD-R services, Anacomp outputs the customer's data from magnetic tape or computer file to a recordable compact disc. For most CD-R customers, Anacomp simultaneously records their data onto microfilm or microfiche. This service was introduced at a selected number of its U.S. data centers in fiscal 1995 and will be expanded during 1996.

- Print and mail services involve outputting customer data to paper, usually on preprinted forms, then mailing the printed information directly to the customer's clients.

- Anacomp will also introduce archival services, which involve storing the customer's images at an Anacomp facility.

Anacomp also offers external facilities management (XFM) services. Anacomp sells an XFP system to a customer, who then pays Anacomp to operate and manage the customer's COM output. Anacomp charges the customer monthly fees based on the volume of COM products produced and also receives additional income from supplies and maintenance charges.

Clients

Major clients include Automatic Data Processing, Citicorp, Electronic Data Systems, General Electric Capital Corporation, The Home Depot and IBM.

Marketing and Sales

Anacomp maintains three separate domestic sales forces:

- The U.S. Group is comprised of 10 regions responsible for sales of micrographics and CD-R services, COM systems and related maintenance services, supplies and

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equipment, sales of digital products, and direct sales of magnetics products.

- The Strategic Partners Group is responsible for sales to competitive service bureaus and government agencies, as well as spearheading the company's new telemarketing efforts.
- The Magnetics Division is responsible for sales of magnetics products to dealers and distributors.

Competitors

Anacomp's COM information services competitors include First Image (which has 66 data service centers) and hundreds of small, local service bureaus.

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IT 2000

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Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

January 1995

Analysts International Corporation

Chairman & CEO: Frederick W. Lang
President & COO: Victor C. Benda
7615 Metro Boulevard
Minneapolis, MN 55439-3050
Phone: (612) 835-5900
Fax: (612) 897-4555

Status:	Public
Employees:	2,600 (6/94)
Revenue:	$ 175,982,000
Fiscal Year End:	6/30/94

Key Points

- Analysts International Corporation (AiC) has 25 branch and 13 field offices in the U.S.
- AiC served 650 clients on a total of 3,125 projects during fiscal year 1994.
- Revenue growth of 10% during fiscal 1994 was attributed primarily to growth in services provided to the banking and finance, telecommunications and services industries.
- The decrease in net income of nearly 4% was primarily due to the reduction in billing rates at a large client.
- A three-for-two stock split was declared in August 1993.
- AiC also announced the establishment of a field office in Tulsa (OK), increasing its number of field offices to 13 in the U.S.

Company Description

AiC was formed in 1966 as a publicly held corporation to provide professional services to a wide variety of industries. Since its inception, AiC has completed more than 10,000 projects for more than 4,500 clients.

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Operations and Structure

AiC is currently organized into four U.S. geographic regions, each managed by a regional vice president. These regions are Eastern, Central, Midwest and Southern.

AiC provides its services through its branch and field offices, assigned on a geographic basis to one of the four regions.

- Each branch office is staffed with technical personnel and managed by a branch manager, who has primary responsibility for the administration, personnel, recruiting, customer relations and profitability of the branch.
- The branch manager has broad authority to conduct the operations of the branch, subject to adherence to corporate policies.
- In general, field offices are established to support specific projects for one or more specific customers at locations not served by a local branch office and are managed by a branch office when the volume of business and the prospects for additional business justify the additional location expenses associated with branch office status.

Regional and branch offices are in Atlanta (GA); Austin, Dallas and Houston (TX); Bellevue (WA); Boca Raton and Tampa (FL); Cleveland and Columbus (OH); Concord (CA); Denver (CO); Durham/Raleigh (NC); Indianapolis (IN); Kansas City (MO); Lexington (KY); Livingston (NJ); Minneapolis and Rochester (MN); New York City and Rochester (NY); Omaha (NE); Phoenix (AZ); Schaumburg (IL); Southfield (MI); and St. Louis (MO).

AiC has field offices in Akron/Canton (OH), Boston (MA), Boulder (CO), Charlotte (NC), Cincinnati (OH), Des Moines (IA), Miami (FL), Philadelphia (PA), Sacramento and San Jose (CA), Washington, D.C., Toronto (Ontario, Canada), Tulsa (OK) and Cambridge (England).

Financials

Fiscal 1994 revenue reached $176.0 million, a 10% increase over fiscal 1993 revenue of $159.7 million. Net income decreased 4%, from $8.3 million in fiscal 1993 to $8.0 million in fiscal 1994.

A five-year financial summary is shown on the following page.

Revenue growth was primarily attributed to increases in billable hours of service rendered to clients as evidenced by increases in technical personnel. Rate increases have not contributed significantly to revenue increases because of prevailing competitive conditions that have made it difficult for the company to increase the hourly rates it charges for its services.

Salaries, contracted services and direct charges, which represent AiC's direct labor costs, have remained constant as a percent of revenues between fiscal 1994 (71.2%), fiscal 1993 (70.5%) and fiscal 1992 (70.4%).

During fiscal 1994, AiC had revenues of $68,000 per employee compared with $70,000 per employee in fiscal 1993.

Interim Results

Revenue for the three months ending September 30, 1994 reached $48.4 million, a 16% increase over $41.7 million for the same period in 1993. Net income rose 25%, from $1.9 million to more than $2.4 million.

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Analysts International Corporation
Five-Year Financial Summary
($ Millions, except per share data)

	Fiscal Year				
Item	6/94	6/93	6/92	6/91	6/90
Revenue	$176.0	$159.7	$129.6	$116.8	$107.8
• Percent change from previous year	10%	23%	11%	8%	20%
Income before taxes	$12.8	$13.5	$8.7	$9.0	$9.9
• Percent change from previous year	(5%)	55%	(3%)	(9%)	18%
Net income	$8.0	$8.3	$5.4	$5.6	$6.0
• Percent change from previous year	(4%)	54%	(4%)	(7%)	20%
Earnings per share (a)	$1.10	$1.15	$0.76	$0.79	$0.86
• Percent change from previous year	(4%)	51%	(4%)	(8%)	18%

(a) Adjusted to reflect a 3-for-2 common stock split in the form of a stock dividend distributed September 30, 1993.

Market Financials

AiC derives its revenue from a range of commercial industry clients but the largest client is IBM.

AiC derived approximately 29% ($51.0 million) of fiscal 1994 revenue, 36% ($57.5 million) of fiscal 1993 revenue and 32% ($41 million) of fiscal 1992 revenue from various operating units and divisions of IBM.

A three-year summary of revenue sources by industry served, as provided by AiC, is shown on the following page.

Geographic Markets

Approximately 95% of AiC's revenue is derived from the U.S. and 5% from international sources.

Employees

As of June 30, 1994, AiC employed 2,600 people, of which 75 are sales staff, 45 are recruiting staff and approximately 2,250 are systems analysts, computer programmers and other technical personnel whose services are billable to clients.

As of October 1994, AiC had approximately 2,800 employees.

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Analysts International Corporation
Three-Year Source of Revenue Summary
($ Millions)

	FISCAL YEAR		
INDUSTRY	6/94	6/93	6/92
Electronics	37%	42%	38%
Manufacturing	10%	12%	15%
Banking and finance	8%	7%	8%
Telecommunications	8%	6%	7%
Services	7%	6%	5%
Oil and chemical	6%	5%	6%
Transportation	5%	5%	3%
Insurance/health care	5%	4%	5%
Food	4%	4%	5%
Merchandising	4%	4%	4%
Power and utility	3%	3%	3%
Government	1%	1%	1%
Other	2%	1%	--
TOTAL	100%	100%	100%

Source: INPUT

Key Products and Services

Virtually 100% of AiC's fiscal 1994 revenue was derived from professional services.

AiC has extensive experience in designing and implementing systems on a variety of large- and small-scale computer systems. Areas of specialization include the following:

- Banking and insurance
- Manufacturing and inventory control
- Business and accounting
- Systems software, including database management systems, compilers and operating systems
- Scientific, specialized control and related applications
- Communications systems for the private sector

Professional services are provided in the following functional areas:

- Generation of functional and detailed design specifications
- Systems software design and development
- Programming, implementation, maintenance, testing and documentation
- Special-purpose systems design and/or modifications, timeshare, process control and medical systems
- Systems orientation and training seminars
- Technical audits
- Equipment evaluation and requirements analysis

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- Systems resource analysis

Examples of AiC projects during fiscal 1994 include the following:

- Development of a system for automation of problem resolution of medical-related products to FDA standards
- Design of automated forms and compliance systems
- Development of an investment management system for a banking institution
- Development of a telemarketing and customer contact system

Marketing and Sales

AiC sells its services through its own direct sales force located at its branch offices.

Competitors

National competitors include professional services divisions of large companies such as IBM and DEC. AiC also competes with other national professional services companies such as Andersen Consulting, Computer Task Group, CGA, Keane Inc. and Computer Horizons.

AiC branch locations compete with various local professional services firms.

INPUT Assessment

AiC is a strong participant in a large market. INPUT estimates the U.S. Professional Services market to be $23 billion in 1994.

The AiC branch office structure allows the company to react quickly to local market changes and will help provide the flexibility that will be necessary for success in the future. The extensive network of branch and field offices will also provide a safeguard against regional business fluctuations.

A potential problem for AiC is competition from small professional services companies as the low overheads of these small companies make it possible for aggressive pricing. This could result in further erosion of AiC revenue per employee and subsequent profitability.

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Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

January 1997

Analysts International Corporation

Chairman & CEO: Frederick W. Lang
President & COO: Victor C. Benda
7615 Metro Boulevard
Minneapolis, MN 55439-3050
Phone: (612) 835-5900
Fax: (612) 897-4555
Internet: http://www.analysts.com

Status:	Public
Employees:	4,050 (9/96)
Revenue:	$ 329,544,000
Fiscal Year End:	6/30/96

Key Points

- Analysts International Corporation (AiC) is a leading provider of professional services, with 29 branch and 12 field offices in North America.
- AiC served 840 clients on a total of 5,800 projects during fiscal 1996.
- Revenue growth of 51% during fiscal 1996 was attributed primarily to major outsourcing contracts with U S WEST and IBM.
- In July 1996, AiC expanded its operations in California with the acquisition of San Jose-based DPI, Inc.
- In August 1996, AiC announced its Year 2000 practice to assist companies in solving Year 2000 problems.

Company Description

AiC was formed in 1966 as a publicly held corporation to provide professional services to a wide variety of industries. Since its inception, AiC has completed more than 10,000 projects for more than 4,500 clients.

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Operations and Structure

AiC is currently organized into five U.S. geographic regions, each managed by a regional vice president. These regions are Eastern, Central, Midwest, Western, and Southern.

AiC provides its services through its branch and field offices, assigned on a geographic basis to one of the five regions.

- Each branch office is staffed with technical personnel and managed by a branch manager who has primary responsibility for the administration, personnel, recruiting, customer relations, and profitability of the branch.
- The branch manager has broad authority to conduct the operations of the branch, subject to adherence to corporate policies.
- In general, field offices are established to support specific projects for one or more specific customers at locations not served by a local branch office and are managed by a branch office when the volume of business and the prospects for additional business justify the additional location expenses associated with branch-office status.

Regional offices are in Indianapolis (IN), New York (NY), St. Louis (MO), Atlanta (GA), and San Francisco (CA).

Branch offices are in Atlanta (GA); Austin, Dallas, and Houston (TX); Bellevue (WA); Boca Raton and Tampa (FL); Cleveland, Columbus, and Mason (OH); Concord, Irvine, and San Jose (CA); Denver (CO); Indianapolis (IN); Iselin (NJ); Kansas City and St. Louis (MO); Lexington (KY); Minneapolis and Rochester (MN); Morrisville (NC); New York City and Rochester (NY); Omaha (NE); Phoenix (AZ); Schaumburg (IL); Southfield (MI), and Tulsa (OK).

AiC has field offices in Akron/Canton (OH), Boston (MA), Boulder (CO), Charlotte (NC), Danbury (CT), Des Moines (IA), Miami (FL), Philadelphia (PA), Portland (OR), Sacramento (CA), Washington, D.C., Toronto (Ontario, Canada), and Cambridge (England).

AiC TechWest, headquartered in Denver, manages the company's U S WEST business.

AiC IBM Project Support Office, based in Tampa (FL), manages the company's IBM business.

Financials

Fiscal 1996 revenue reached $329.5 million, a 51% increase over fiscal 1995 revenue of $218.4 million. Net income increased nearly 10%, from $11.3 million in fiscal 1995 to $12.4 million in fiscal 1996.

A five-year financial summary is shown on the following page.

Revenue increased approximately $111 million in fiscal 1996.

- Revenue from outsourcing contracts with U S WEST and IBM, which began in June and August of 1995, respectively, accounted for slightly over 50% of the fiscal 1996 increase.
- Excluding revenue from these two sources, fiscal 1996 revenue increased 22% over fiscal 1995 levels due primarily to increases in billable hours of service rendered to clients. Rate increases have not contributed significantly to revenue increases because of prevailing competitive conditions that have made it difficult for the company to increase the hourly rates it charges for its services.

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Analysts International Corporation
Five-Year Financial Summary
($ Millions, except per-share data)

	Fiscal Year				
Item	6/96	6/95	6/94	6/93	6/92
Revenue	$329.5	$218.4	$176.0	$159.7	$129.6
• Percent change from previous year	51%	24%	10%	23%	11%
Income before taxes	$20.7	$18.5	$12.8	$13.5	$8.7
• Percent change from previous year	12%	45%	(5%)	55%	(3%)
Net income	$12.4	$11.3	$8.0	$8.3	$5.4
• Percent change from previous year	10%	42%	(4%)	54%	(4%)
Earnings per share	$0.84	$0.78	$0.55	$0.58	$0.38
• Percent change from previous year	8%	42%	(5%)	53%	(4%)

Salaries, contracted services, and direct charges, which represent AiC's direct labor costs, rose to 76.6% of revenue in fiscal 1996, compared to 71.3% of revenue in fiscal 1995 and 70.5% of revenue in fiscal 1994. The increases in fiscal 1996 were due to the U S WEST and IBM contracts. AiC uses subcontractors to augment its capacity as needed.

During fiscal 1996, AiC had revenues of $87,412 per employee, compared with $68,904 per employee in fiscal 1995.

Interim Results

Revenue for the three months ending September 30, 1996 reached $98.0 million, a 34% increase over $73.1 million for the same period in 1995.

- Revenues for this year's period include $20 million of pass-through billings from subcontracts under national contracts with U S WEST. These pass-through billings have the effect of reducing the company's margins.

- Net income rose 38%, from $2.8 million to nearly $3.9 million.

Market Financials

AiC derives its revenue from a range of commercial industry clients; its largest client is IBM.

A three-year summary of revenue sources by industry served, as provided by AiC, is shown on the following page.

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Analysts International Corporation
Three-Year Source of Revenue Summary

	Fiscal Year		
Industry	6/96	6/95	6/94
Telecommunications	29%	17%	8%
Electronics	23%	27%	37%
Services	10%	12%	7%
Manufacturing	9%	11%	10%
Banking and finance	5%	7%	8%
Oil and chemical	5%	6%	6%
Merchandising	4%	4%	4%
Food	3%	4%	4%
Insurance/health care	5%	4%	5%
Power and utility	2%	2%	3%
Government	2%	1%	1%
Transportation	1%	2%	5%
Other	2%	3%	2%
TOTAL	100%	100%	100%

Source: AiC

AiC derived approximately 18% ($59.3 million) of fiscal 1996 revenue, 20% ($43.7 million) of fiscal 1995 revenue, and 29% ($51.0 million) of fiscal 1994 revenue from various operating units and divisions of IBM.

AiC derived approximately 23% ($75.8 million) of fiscal 1996 revenue, 6% ($13.1 million) of fiscal 1995 revenue, and 4% ($4.4 million) of fiscal 1994 revenue from U S WEST.

Geographic Markets

Approximately 95% of AiC's revenue is derived from the U.S. and 5% from international sources.

Acquisitions

In July 1996, AiC acquired the software services business of DPI, Inc. of San Jose (CA) for $5.65 million in cash.

- DPI, with 1995 revenue of $11 million, provides programming and consulting services to corporations in the San Francisco Bay Area. DPI is also developing a suite of software products for use with Lotus Notes and provides Lotus Notes consulting and related services.
- The acquisition expands AiC's share of the very large market for software services in the Bay Area.

Employees

As of June 30, 1996, AiC employed 3,770 people, of which 95 were sales staff, 100 recruiting staff and approximately 3,200 were systems analysts, computer programmers, and other technical personnel whose services are billable to clients.

As of September 1996, AiC had approximately 4,050 employees.

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Key Products and Services

Virtually 100% of AiC's fiscal 1996 revenue was derived from professional services.

AiC has extensive experience in designing and implementing systems on a variety of large- and small-scale computer systems. Areas of specialization include the following:

- Banking and insurance
- Manufacturing and inventory control
- Business and accounting
- Systems software, including database management systems, compilers, and operating systems
- Scientific, specialized control, and related applications
- Communications systems for the private sector

Professional services are provided in the following functional areas:

- Generation of functional and detailed design specifications
- Systems software design and development
- Programming, implementation, maintenance, testing, and documentation
- Special-purpose systems design and/or modifications, timeshare, process control, and medical systems
- Systems orientation and training seminars
- Technical audits
- Equipment evaluation and requirements analysis
- Systems resource analysis
- Year 2000 conversions

In June 1995, AiC entered into a three-year agreement with U S WEST under which AiC will be the principal vendor providing technical personnel to U S WEST's data processing operations.

- At present levels of support, the contract will add approximately $50 million to AiC's annual revenue.
- In addition to the approximately 220 programmers and other technical personnel it had on assignment at U S WEST as of June 30, 1996, AiC also is responsible for managing subcontractors who provide approximately 700 technicians.

During fiscal 1996, AiC provided services through substantially all of its branch offices to various divisions of IBM.

- As of July 29, 1995, AiC was named one of four primary vendors to IBM in three IBM regions and one of four secondary vendors in IBM's two other regions.
- Hourly rates for services provided to IBM under this arrangement are very competitive and as a result the profit margin from IBM business is expected to be lower. The lower margin may be offset by a higher volume of business.

Examples of AiC projects during fiscal 1996 include the following:

- Developing design specifications for updating a Project Management Information System for BASF Corporation
- Designing, developing, and implementing a new sales and marketing system for M.A. Hanna Company

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- Designing and developing a new international pricing system for United Van Lines

Examples of AiC projects during fiscal 1995 include the following:

- Providing consulting, programming, and technical staff to TransQuest, a Delta Air Lines subsidiary that provides information systems and services to the travel and transportation industries

- Providing consulting and conversion support to the Omaha Housing Authority

- Developing, implementing, and supporting custom software for an on-line delivery system at Key Services Corporation

- Enhancing, modifying, and supporting legacy software in the financial systems area of 3M

- Design and development of customer software in support of a traffic management system for Maritz Performance Improvement Company

Marketing and Sales

AiC sells its services through its own direct sales force located at its branch offices.

Competitors

National competitors include professional services divisions of large companies such as IBM and Digital. AiC also competes with other national professional services companies such as Andersen Consulting, Computer Task Group, CGA, Keane Inc., Computer Data Systems, and Computer Horizons.

AiC branch locations compete with various local professional services firms.

INPUT Assessment

AiC is a strong participant in a large market.

The AiC branch-office structure allows the company to react quickly to local market changes and will help provide the flexibility that will be necessary for success in the future. The extensive network of branch and field offices also will provide a safeguard against regional business fluctuations.

A potential problem for AiC is competition from small professional services companies, as the low overhead of these small companies allows them aggressive pricing.

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Vendor Profile

A Publication from INPUT's Information Services Vendor Analysis Programme - Europe

1996

Andersen Consulting (Europe)

2 Arundel Street
London WC2R 3LT
England
Tel: +44 171 438 5000
Fax: +44 171 438 5757

Managing Partner (Europe):	Vernon Ellis
Total Consultants (Europe):	9,700
Total Personnel (Europe):	11,440
European Revenue	$ 1,142 Million (Estimates)

Contents

Company Description 1
Operations and Structure 2
Company Strategy 5
Financials 6
Market Analysis 7
Acquisitions/Divestitures 9
Employees 9
Key Products and Services 9
Recent Projects 11
Alliances 12
INPUT Assessment 13

Key Points

- A worldwide leader in management and IT consulting, with 153 offices in 47 countries
- Generated $3.45 billion revenues worldwide in 1994, just over $1 billion in Europe
- Has operated as a separate business unit from the tax/audit firm of Authur Andersen since 1989
- Employs over 11,000 people in Europe, of which 85% are consultants
- Serves all industry sectors with Business Process Management, System Integration, Strategic and Change Management Services.

Company Description

Andersen Consulting is an international management and technology consulting organisation, whose mission is to help its clients change to be more successful.

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The organisation works with clients from every industry to integrate their people, processes, strategies and technologies.

It offers its services through the following service lines to businesses across all industry sectors:

- **Business Process Management**, including data centre/network operations, applications development, applications management and business function outsourcing
- **Systems Integration**, including systems planning, design, development and implementation
- **Strategic Services**, including competitive and market strategy, organisation and change strategy, business operations strategy, and information and technology strategy
- **Change Management Services**, including human resource issues such as leadership development, organisation, job design, and education.

Andersen Consulting also offers manufacturing and logistics application software products, CASE tools and designware.

It has operated as a separate business unit from the tax/audit firm Arthur Andersen since 1989, with its own operations and managing partner. (The original parent firm was founded in the US in 1913 and entered the information services business in 1952).

Operations and Structure

Worldwide, Andersen Consulting currently serves clients through 153 offices in 47 countries. The European organisation (including the Middle East, India and Africa), known as EMEAI, operates through 60 offices in 26 countries. The organisation has more than 11,000 personnel in Europe, 85% of these being consultants.

Each country practice is run by its own national partnership and each office is staffed by nationals of the country in which it is located. The professionals operating in each country can call upon a global network of knowledge, experience and expertise to bring to bear on client projects, thereby providing a "seamless" service to companies across borders and bringing best practices from Japan, US and elsewhere in the world. This combination of inter-dependence and connectivity is considered to be extremely important by Andersen Consulting and has been a key component of its success.

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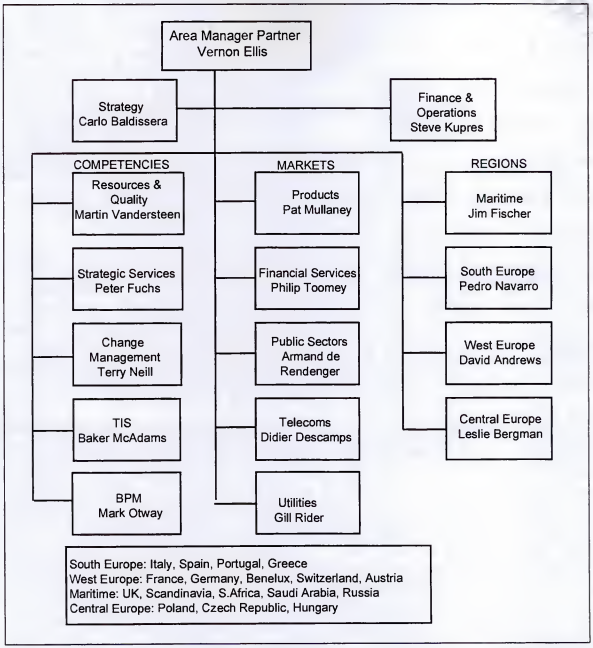
Exhibit 1

Andersen Consulting - EMEAI Region Organisation



Source: INPUT

The Andersen Consulting European organisation is shown in Exhibit 1.

Services and products are offered through six vertical industry practices. Each industry practice is directed by a managing partner, charged with such activities as anticipating trends in that industry, driving sales, conducting R&D. The practices work together to share expertise and experience, and 'best practice' examples are transferred from industry to industry.

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The industry practices are:

- Products
  - Consumer Products
  - Industry Products
  - Process/Energy
- Telecommunications
- Financial Services
  - Insurance
  - Financial Markets
  - Retail Financial Services
- Government
- Healthcare
- Utilities.

Through the Professional Education Division, more than 700 courses are available to each Andersen Consulting consultant. By the time a consultant reaches the associate partner level, he or she will have received more than 1,000 hours of training. Investment in training at Andersen Consulting worldwide grew to $205m in 1994 (from $195m in 1993), with training and education programmes on interactive media technology, CD-ROM and knowledge-based training undertaken at education centres at Veldhoven in The Netherlands and other centres in St.Charles, US, Singapore and Melbourne.

Andersen Consulting's continued investment in research and development has resulted in the establishment of a number of Advanced Technology and Business Integration Centres in Europe and worldwide.

The Advanced Technology Centres are staffed with technology specialists, workstations and computer networks. The solution centres give Andersen Consulting a technology infrastructure dedicated to meeting specific client-related needs, in addition to helping consultants who work at the client site. These are located in Manila, Toronto, Minneapolis, Madrid, Aberdeen (Scotland), and other international sites.

A new type of technology centre, the Centre for Strategic Technology in Palo Alto, California, caters for applied research into leading technologies such as multimedia, workgroup communications, object orientation. A new European Technology Centre in France showcases software products and advanced technology to the European market.

Seven Business Integration Centres currently operate worldwide. These centres serve as showcases for Andersen Consulting's research and development into solutions for the retail, distribution and manufacturing industries. Project teams from around the world build and demonstrate visions of the future through full-scale working technology exhibits (e.g. a factory floor or a hospital).

SMART STORE Europe is Andersen Consulting's first European Business Integration Centre, which opened in Windsor, UK in October 1993. Clients are focusing more on their real needs and are re-examining traditional working practices to remain competitive. This 4.3 ECUm ($5m) research and development centre provides clients with a forum to explore "what is possible today" and

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"what is required tomorrow" and the forces shaping the European marketplace. Other Business Integration Centres include the Health Strategy Centre (Dallas), LOGISTICS 2020 and Process 2020 (Atlanta), SMART STORE (Chicago and Sydney) and The Retail Place (Chicago).

The Energy Forum, the firm's newest European centres, recently opened in the UK. The forum provides a tailor-made facility for petroleum industry clients to discuss how they can effectively change their business operations in the light of industry changes. Other Oil Centres are located in Singapore and Houston.

Company Strategy

Andersen Consulting's Mission is:

"To help our clients change to be more successful"

and its Vision:

"To be one global firm committed to quality by having the best people with knowledge capital, partnering with the best clients to deliver value"

The firm claims to have evolved from the status of "systems builder" through "systems integrator", to "global business integrator". It seeks to gain and maintain position by being the pre-eminent provider of solutions to "top" organisations worldwide. However, whilst systems integration represents an important element of Andersen Consulting's portfolio, it sees itself as *"a full-service management and technology consulting firm"*. Andersen Consulting's primary positioning with customers/prospects is to promote itself as the critical resource and partner to help achieve results for organisations committed to improving themselves. It uses this consistent theme in combination with its in-depth vertical industry expertise to present itself as a number one seller of business solutions.

The process is targeted at developing high-level business solutions, and converting them by the application of information technology. Andersen Consulting was one of the first, and clearly is one of the most successful, systems integrators to approach the "strategic systems" market. At the heart of the Andersen Consulting "process" is the firm's ability to manage change initiatives from initial strategy formulation to long-term management, assuming implementation risk along the way. The firm understands the value of developing relationships with high-level managers in target companies and industries and very effectively utilises referral selling at these levels. Its demonstrated capability of dealing with projects over $50 million makes it one of the few commercial systems integrators that can make that claim and the high percentage of repeat business in this market reflects the strength of the firm"s long-term account relationships with its clients.

Andersen Consulting enjoys a possibly unique marketing position among leading systems integrators. It frequently "writes" the RFP, at least in the figurative sense. Andersen Consulting's business consulting skills often give it entry to the prospect's environment long before a solution or even, at times, the problem, has been defined. As a full-service provider, Andersen Consulting is also a logical choice for implementer once the consulting is done.

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Exhibit 2 summarises Andersen Consulting's marketing strategy.

Exhibit 2

Andersen Consulting Marketing Strategy

- Positioning: critical resource and partner
- Broad-based business integration approach
- Vertical market focus for commercial marketplace
- Results-orientated work
- Strong methodology
- Ability to orchestrate complex change
- Ability to marshal international expertise
- Assumption of implementation risk
- Technology expertise
- Promotion: referral, technology/business integration centres
- Primary competitors: IBM, EDS, CSC, McKinsey

Source: INPUT

Financials

A five-year revenue summary for Andersen Consulting worldwide, analysed by Region, is shown in Exhibit 3.

Of the Europe/Middle East/Africa/India (EMEAI) category over 97% is accounted for by Europe. This represented revenues of $1,016 million in 1993, and $1,142 in 1994.

Exhibit 3

Andersen Consulting Five-year Revenue Summary ($ Millions)

Calendar Year	1990	1991	1992	1993	1994
Total Revenue	2,057.1	2,341.4	2,722.9	2,876.3	3,452
Annual Change	*31.8%*	*13.8%*	*16.3%*	*5.6%*	*20%*
Americas	1,153.0	1,226.4	1,383.0	1,573.9	1,941
Annual Change	*23.3%*	*6.4%*	*12.8%*	*13.8%*	*23%*
Asia Pacific	133.9	165.5	209.0	259.4	330
Annual Change	*16.3%*	*23.6%*	*26.3%*	*24.1%*	*27%*
Europe/M.East/Africa/India	770.2	949.5	1,130.9	1,043.0	1,181
Annual Change	*50.5%*	*23.3%*	*19.1%*	*(7.8%)**	*13%*

** Real growth of 8% in local currencies*

Source: Andersen Consulting

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Market Analysis

A five-year summary of worldwide revenue by industry market, as provided by Andersen Consulting, is shown in Exhibit 4, with a European breakdown provided as Exhibit 5 and country breakdown as Exhibit 6.

Exhibit 4

Andersen Consulting
Five-year Worldwide Source of Revenue Summary ($ Millions)

Industry Group	1990	1991	1992	1993	1994
Financial Services*	534.5	590.6	672.3	714.7	974
Annual Change	*32%*	*10%*	*14%*	*6%*	*36%*
Government	250.9	281.6	287.9	302.3	339
Annual Change	*42%*	*12%*	*2%*	*5%*	*12%*
Healthcare	53.2	70.2	77.5	81.0	97%
Annual Change	*(4%)*	*32%*	*10%*	*5%*	*18%*
Products †	907.2	985.4	1,122.6	1,212.5	1,380
Annual Change	*31%*	*9%*	*14%*	*8%*	*14%*
Telecomms/Communications	107.4	136.0	192.2	237.7	364
Annual Change	*23%*	*27%*	*41%*	*24%*	*52%*
Utilities	124.0	184.7	260.3	232.6	225
Annual Change	*48%*	*49%*	*41%*	*(11%)*	*(3%)*
Other	79.9	92.9	110.1	95.5	73
Annual Change	*31%*	*16%*	*19%*	*(13%)*	*(22%)*

Source: Andersen Consulting

† "Products" = Consumer + Industrial + Process/Energy

** "Financial Services" = Retail Financial Services + Financial Markets+ Insurance*

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Exhibit 5

Andersen Consulting
European Revenues by Delivery Mode
1994 $ Millions

Delivery Mode	Revenues in $ Millions	Share
System Software Products	25	2%
Application Software Products	40	4%
Professional Services	435	38%
Systems Integration	474	42%
Systems Operations	120	11%
Total Software & Services	1094	96%
Equipment / Other Revenues	48	4%
Total European Revenues	1142	100%

Source: INPUT Estimates
Percentages are rounded

An industry sector analysis of Andersen's European revenues is provided in Exhibit 6.

Exhibit 6

Andersen Consulting
European Revenues by Industry Sector
1994, $ Millions

Industry Sector	Revenues in $ Millions	Share
Discrete Manufacturing	140	13%
Process Manufacturing	240	22%
Transportation	8	1%
Retail Distribution	8	1%
Wholesale Distribution	11	1%
Telecommunications	55	5%
Utilities	100	9%
Banking & Finance	315	29%
Insurance	90	8%
Health Services	10	1%
Government	105	10%
Business Services	12	1%
Total Software & Services	1094	100%

Source: INPUT Estimates
Percentages are rounded

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Exhibits 7 and 8 show Andersen Consulting's estimated European revenues by INPUT Delivery Mode and Industry Sector categories.

Exhibit 7

Andersen Consulting
1993 European Market Analysis by Delivery Mode

Delivery Mode	$ M	Per cent
Systems Software Products	21	2
Application Software Products	38	4
Professional Services	383	38
Systems Integration	456	45
Systems Operations	47	4
Total Software and Services	945	93
Equipment Services	0	0
Total Information Services	945	93
Equipment/Other Revenues	71	7
Total European Revenues	**1016**	**100**

Source: INPUT

Acquisitions/Divestitures

In 1992 Andersen Consulting acquired Educational Computing Consortium, a 50-person consulting firm based in the Netherlands specialising in computer-based training (CBT) and integrated performance support systems.

Employees

Andersen Consulting's headcount for Europe is shown in Exhibit 9.

Exhibit 9

Andersen Consulting
Four-year Professional Headcount - Europe (FYE 31/12/1993)

	1991	1992	1993	1994
Consultant	7718	8423	8871	9720
Annual Growth	19%	10%	6%	15%

Source: INPUT

Andersen Consulting has maintained this expansion almost exclusively through organic growth, with a firm policy of graduate recruitment and staff development. In addition, Andersen Consulting brings in experienced consultants for some market sectors to ensure it has the best possible expertise in place to ensure the client's success. As the firm takes an increasingly larger market share in its chosen sectors, so it is seeking an ever higher proportion of the available skill pool.

Key Products and Services

Andersen Consulting continues to commit major resources to its six vertical industry practices. It focuses its attention on a critical understanding of its client's industry and sees each sector as subject to a unique combination of forces affecting business decisions. It regards this industry focus as key to remaining relevant in the marketplace and with its clients.

In 1993, a large part of Andersen Consulting's growth in Europe was attributable to Telecommunications, which experienced a considerable real growth of 73% to $27m, through work on reengineering traditional business processes, developing and implementing new billing and customer contact systems.

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In Europe, Andersen Consulting is particularly strong in financial services, utilities, and in what it terms the "products" industry sector (particularly in both process and discrete manufacturing and consumer products).

- Financial Services, in particular, the retail banking sub-sector, grew as new technologies, such as FOUNDATION CASE tools drive the development of new products and services
- Consumer Products recorded significant growth as retailers, manufacturers and distributors began to focus more on customer needs.

The firm operates as a matrix structure, combining and integrating services from its various *service lines* and delivering what it describes as *business integration solutions*. As clients ask for broader, more fundamental reengineering of their businesses, Andersen Consulting believes that the key is to offer comprehensive business process reengineering. It combines its services and industry skills to link change to the client's people, processes, technology and strategy.

The service lines are as follows:

Business Process Management

- Data centre/network operation
- Applications development
- Applications management
- Business function outsourcing.

Systems Integration

- Systems planning
- Systems design
- Systems building
- Systems implementation.

Strategic Services

- Competitive & market strategy
- Organisation & change strategy
- Business operations strategy
- Information & technology strategy

Change Management Services

- Organisation Change
- Technology Assimilation
- Integrated Performance Support
- Education & Training.

Business Process Management increasingly represents an on-going process rather than a one-off event and with an emphasis, therefore, on long-term relationships.

Strategic Services and Change Management Services service lines are reportedly developing rapidly as Andersen Consulting continues to build a strategic consulting practice through the recruitment of experienced individuals to complement in-house personnel. Change Management Services employ over 1,500 staff worldwide and the practice focuses on the "people" aspect of the business integration model, which aims to create a comprehensive methodology for enhanced human performance both during and as a result of transformational change.

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Exhibit 10

Andersen Consulting
Applications Software Products & Development Tools

Product	Description
Application Development Tools: FOUNDATION product set	Application development tool for both host based systems and client/server applications. Composed of Foundation and Foundation for Co-operative Processing. The complete line comprises development components such as METHOD/1, DESIGN/1, INSTALL/1, AND PLAN/1.
Application Products & Frameworks MAC-PAC OPEN Reusable Software	Integrated manufacturing, distribution, and financial management. Various products such as customer/1, tax administration system and others that are customised designware developed specifically for industries such as government and utilities. Reusable software represents transferable solutions developed with clients addressing specific industry functions.

Source: INPUT

Application Products & Development Tools

Andersen Consulting's key application software products and development tools are listed in Exhibit 10.

Andersen Consulting is continually enhancing its FOUNDATION CASE tool set, which plays a key role in building mission-critical client/server systems. These products are used at more than 1,600 client sites worldwide. The range consists of FOUNDATION, FOUNDATION for Co-operative Processing, METHOD/1, DESIGN/1, INSTALL/1, and PLAN/1. FOUNDATION is used to help develop information systems and covers analysis, design and programming.

Recent Projects

INPUT estimates that Andersen Consulting wins almost 60% of the projects it actively bids on and it has completed projects ranging from $2 million to $80 million (average size about $10 million).

In the past, the company's activities have been largely concentrated in discrete and process manufacturing, telecommunications, state and local government, banking and insurance and airlines. However, Andersen Consulting's top commercial customers today, come from all industry sectors. Recent years have seen considerable growth in consumer products, telecommunications and government sectors.

The following are some recent major European projects.

- Fiat (The Netherlands) — in a joint venture with Fiat, Andersen Consulting manages Fiat's complete European $400 million parts business for its new agricultural machinery plant in the Netherlands
- 1994 Winter Olympics (Lillehammer) — contracted to provide systems development and licensing of its FOUNDATION integrated CASE tool; responsible for two key information systems and their

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integration — Games Management and INFO'94 systems, which were first developed for the 1992 Winter Olympics at Albertville, France

- Police Operative Support System (POS) — real-time information system with electronic mapping for the Norwegian police, first introduced during the 1994 Winter Olympics

- National Power (UK) — power station automation project, involving the development and implementation of new management and operational systems

- British Petroleum Exploration Europe — under a five-year $89 million systems management contract, Andersen Consulting has taken over all financial accounting services

- London's International Stock Exchange — awarded a major systems management contract in April 1992, amid controversy that the contract did not go to open tender; a five-year arrangement to streamline the Exchange's £60m IT cost base, taking over management of the Exchange's IT systems and data processing staff. £10m of the target £32m cost reductions and improvements have already been achieved; in 1993 the firm was awarded a £47m contract to build a new trading system

- Komercni Banka (Czech Republic) — management of total transformational change which involves the complete re-thinking of the bank's traditional approach to business, reengineering practices, introducing customer focus and installing new systems

- ICA (Sweden's largest food wholesaler and retailer) — reengineering of total operations and restructuring of geographic divisions to help Sweden's $8 billion largest food wholesaler and retailer to re-think its entire distribution strategy

- Oticon (Denmark) — creation of an entirely new structure, requiring close consultation between consultants from systems integration and change management services

- AGIP (Italy) — working with the Italian oil company to prepare it for privatisation

- Caja España (Spain) — developing information systems for the 500 branch Spanish regional savings bank.

Other major European project customers include:

Hoechst	*Germany*
Smith Kline Beecham	*UK*
Seeboard PLC	*UK*
Armée de Terre	*France*
France Telecom	*France*
Electricité de France	*France*
Compania Sevillana de Electricidad	*Spain*
Telefonica d'Espagña	*Spain*
Belgacom	*Belgium*

Alliances

Andersen Consulting has established some significant alliances that strengthen the firm's SI capabilities. As with most other major systems integrators, Andersen Consulting utilises both long-term and project-by-project alliances. It believes that the use of alliances supports its strategy for SI by:

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- Providing hardware at competitive prices
- Giving it early access to new technologies
- Providing assistance in financing projects
- Supplementing areas where it has limited internal capability, such as maintenance support and worldwide telecommunications.

The majority of its longer-term alliances have evolved from working with particular subcontractors or partners on a repetitive basis. Other alliances have developed as a result of Andersen's strategy to develop industry-specific software.

In May 1995, Andersen Consulting announced an alliance with PeopleSoft, which aims to develop a new generation of PPS-software PeopleSoft Manufacturing. Providing industry sector know-how and human resources, Andersen's part will be the support of PeopleSoft in the development as well as the documentation of the MAC-PAC-Software products. Both parties will be responsible for distribution, planning to offer MAC-PAC clients PeopleSoft Manufacturing, Distribution Financials and Human Resources Management.

INPUT Assessment

INPUT expects that Andersen Consulting will continue to develop partnerships with leading application software product vendors to gain access to the building blocks required for systems integration projects. Andersen Consulting will also endeavour to maintain a high level of capability in leading-edge fields such as imaging, artificial intelligence and object-oriented technology and will again use partnerships to achieve this aim.

Andersen Consulting has significant capabilities in the areas that are most important for winning and executing business integration and SI contracts. Its focus on the top end of the life cycle and perceived strengths in understanding business solutions in many industry sectors gives it an edge in the market that few others possess.

Andersen Consulting's principal skills lie in using its *front end* management consultancy skills and credibility with clients to penetrate accounts and then following through with other IS professional services, complex systems integration projects or the implementation of complete new information systems. Its management consultant capability centres on business integration and it combines strengths in:

- Devising both business and IT strategies in fast changing markets
- Planning, developing and implementing computer systems and networks with appropriate IS technology
- Managing and controlling large computer centres and telecommunications networks
- Managing the resulting changes and their impact on people within the business organisation.

A Key strength of Andersen Consulting is its contacts at senior executive level in customer companies. Each partner has access to senior client executives.

Also key is Andersen Consulting's ability to formulate client requirements. Focusing on the high end of the life cycle, it frequently *writes* the Request For Proposal (RFP) — a position

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that many of its competitors envy. The result is a very high success rate in winning contracts, minimising marketing and bid preparation costs.

Andersen Consulting has an excellent overall image as a systems integrator. Strengths include its ability to manage the client's planning process, the resources to handle very large projects, and its focus on professional services.

Business Consulting, Design, and Project Management are further areas of Andersen Consulting's strength. The combination of a solid methodology along with uniform and effective training of its personnel produces consistent, if not always exceptional results. Consistent with the professional services orientation of the firm, education, training, and documentation are also significant skills that it markets heavily as part of its capabilities, aided by a strong service-orientated culture.

Packaged Applications Software is clearly an area of strength for Andersen Consulting, which has made significant investments in the development of numerous packages. The aggressive marketing of these packages, along with the development and utilisation of strong alliances to fill the gaps, gives Andersen Consulting a very strong position within its competitive group in the applications software area.

In those areas where Andersen Consulting might be perceived as having weaknesses, there are plans in place to address the relevant issues:

- The *by the book* (perceived by some as overly structured) approach to design and engineering is fading as more strategic consultants, focused on change management and strategic services projects, enter the SI practice- however, the full impact of this has yet to be felt
- A relatively weak technical image is being overcome by heavy investment in technology support.

Andersen Consulting's strengths far outweigh its weaknesses. Its strong capabilities at the high end of the life cycle serve to reduce significantly its dependencies on outside suppliers for the high-risk elements of most SI-contracts. However, some problems do exist.

For example, it has been claimed that the firm's partnership culture has in the past worked against change. However, recent restructuring under the *Horizon 2000* umbrella is likely to minimise the effect of this problem.

Also, Andersen Consulting's approach to systems integration has been heavily business-process-orientated. Top-down in nature, the approach is not suitable for *every* client.

Overall, INPUT expects Andersen Consulting to remain one of the major firms in the professional services/systems integration market segments. The key determinant of success in much of this market is the vendor's credibility in business consulting with senior executives. In this respect Andersen Consulting has successfully differentiated itself from its major competitors and is the only major international consulting firm to have made really significant in-roads into the IT professional services business.

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Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

May 1997

Andersen Consulting - Outsourcing

Address: 100 South Wacker Drive
Chicago, IL 60606
Phone: (312) 372-7100
Fax: (312) 507-8970
Internet: http://www.ac.com

ANDERSEN CONSULTING

Status:	Partnership
Total WW Consulting Partners:	1,060 (12/96)
Total WW Outsourcing Personnel:	7,000 (12/96)
Total WW Revenue:	$5,302,000,000
Total WW Outsourcing Revenue:	$582,000,000
Calendar Year End:	12/31/96

The following profile outlines the products, services, and support offered by Andersen Consulting to its clients for outsourcing services and offers a representative sample of recent outsourcing contracts.

Company Description

Andersen Consulting is a leading outsourcer of business process management, or business operations.

Andersen Consulting, a partnership, is a global management and technology consulting organization. With its Business Process Management services, Andersen Consulting links technology, people, and processes to a client's strategy to deliver a service that helps companies transform and continuously improve their business processes. The partnership is organized into six major industry practices and provides a range of services, including management consulting, systems integration, and outsourcing services. Of the firm's 5,000 clients, more than 250 are Fortune 500 companies.

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Organizational Structure

Andersen Consulting's current organization is led by the firm's executive committee, headed by George T. Shaheen, Managing Partner. The firm currently serves its clients through 149 locations in 47 countries, including 73 locations in the Americas, 57 locations in Europe/Middle East/Africa/India, and 19 locations in Asia/Pacific.

The Business Integration and Practice Competence unit, headed by Managing Partner Keith Burgess, includes Business Process Management (BPM), Change Management, Process, Strategic Services, and Technology. Outsourcing services are provided by the BPM organization, which employs more than 7,000 professionals, represents more than 140 clients worldwide, and accounts for approximately 11% of total company revenue.

Joellin Comerford is the Worldwide Managing Partner of Business Process Management as well as the Managing Partner for the Americas. Reporting directly to her are the managing partners for the other two world regions and the BPM partners heading up each market unit in the Americas. Each market unit represents a grouping of target clients in an industry or geographic region.

Andersen Consulting's pool of Business Process Management professionals grew 74% from fiscal 1995 to 1996. An organization chart depicting Business Process Management leadership, worldwide, appears in Exhibit 1, on the following page.

Company Vision

Andersen Consulting's vision is "to be one global firm committed to quality by having the best people with knowledge capital, partnering with the best clients to deliver value." The firm's mission is to help its clients change to be more successful.

Company Outsourcing Strategy

Andersen Consulting's Business Process Management (BPM) organization targets outsourcing of business processes, such as information technology, logistics/procurement, finance and administration, and customer service. Additionally, Andersen Consulting targets applications management opportunities.

Industries that are highly impacted by change, such as communications, retail financial services, chemicals, and energy represent key markets.

Andersen Consulting performs outsourcing services across every industry and maintains a diversified array of clients. The firm has more than 140 outsourcing clients. Markets that made important contributions to total revenues in 1996 are indicated in Exhibit 2.

Exhibit 2

Andersen Consulting Market Contribution

Market	1996 Revenue ($M)	Percentage Change 1995-1996
Communications	$756	32%
Retail Financial Services	$697	31%
Utilities	$368	30%

Source: Andersen Consulting

Other industries of strategic importance to Andersen Consulting include: insurance, industrial products, pharmaceuticals, and utilities.

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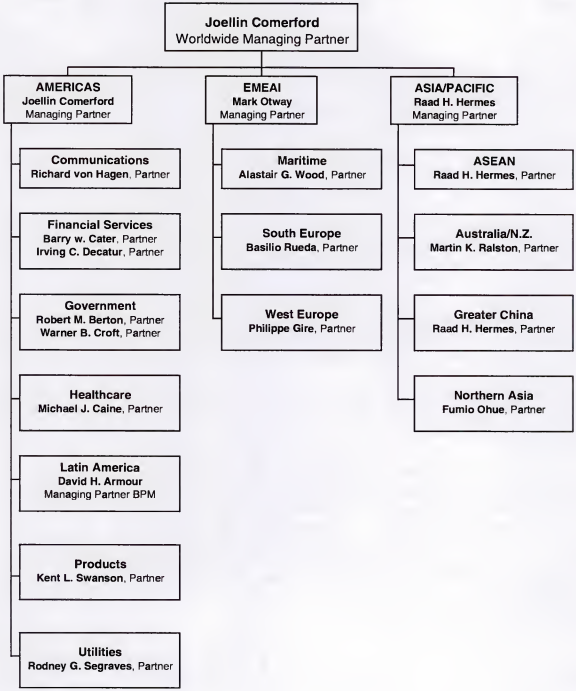
Exhibit 1

Andersen Consulting
Business Process Management
Organization Chart



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Andersen Consulting emphasizes "partnering" with its clients in order to effect complex change and create a more successful client enterprise. The company also emphasizes delivering value by linking the results of change initiatives to long-term, measurable outcomes such as increased profitability and shareholder wealth.

The firm employs alliances to deliver a full-service offering, when it is in the best interests of the client. For example, in late 1995 and in 1996, Andersen Consulting formed an alliance with GE Capital and with GE Capital Canada to pursue total IT outsourcing opportunities in the U.S. and Canadian mainframe outsourcing markets.

Recently, Andersen has also allied with other vendors to provide comprehensive solutions, such as in the CSC-led Pinnacle Alliance for client J.P. Morgan. Begun in 1996, the Pinnacle Alliance demonstrates Andersen Consulting's interest in allying with other organizations with complementary skills. In this case, the firm is providing total application management and development support while teaming with CSC for IT infrastructure, AT&T Solutions for global network operations management, and Bell Atlantic Network Integrators for local distributed services. By teaming with leaders in their particular fields of information technology, Andersen Consulting believes that it can deliver a best-of-breed solution suited to the specific needs of its clients.

Other examples of client-specific alliances with complementary vendors to deliver comprehensive outsourcing services include contracts with the following clients:

- LTV Corporation—Andersen Consulting is responsible for managing the client's IS functions and is teamed with GE Capital for data processing and I-Net for network services.

- Halliburton Energy Services—Andersen Consulting provides applications management for financial and administrative systems, and equipment and product operations systems. Andersen Consulting is also responsible for migrating mainframe applications to a client/server environment, while I-Net is providing network services and Origin is providing data center management support.

- Talegen Holdings Inc.—Andersen Consulting manages the overall delivery of information technology and application services of Talegen Holdings, the property and casualty insurance unit of Xerox Corp., while GE Capital provides infrastructure services.

Andersen Consulting continues to open new industry-focused Business Integration Centers to help clients visualize how they can change to be more successful. While these centers are not designed specifically for the vendor's outsourcing business, they are available to all Andersen Consulting clients, including outsourcing clients.

Andersen Consulting has also developed shared outsourcing service centers for business process outsourcing or applications management. SENERGY, a Business Process Outsourcing center for Finance & Administrative Services for the energy industry, is a prime example. The SENERGY center in Houston employs approximately 130 computer, financial, and administrative staff to implement services for energy companies such as BP America.

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A similar shared services center, the Andersen Center Aberdeen (ACA), is located in Scotland and handles the accounting functions for BP Exploration and other major North Sea oil companies such as ASCo, Conoco, Elf Caledonia Ltd., and Talisman Energy (U.K.) Ltd. Key aspects of the services include joint-venture accounting, provision of management information, tax reporting, preparation of group and statutory accounts, and processing and paying tens of thousands of invoices each month. The project has not only enabled Andersen Consulting's clients to focus more on strategic core business activities, but is serving as a catalyst for further simplification and standardization throughout the North Sea oil industry.

Through innovative services and partnership arrangements, key global clients such as British Petroleum are able to capitalize on the efficiencies of shared services to offer competitive services to other players in their industries. Examples include:

- Fiat New Holland, in Turin (Italy), formed a joint venture with Andersen Consulting for the management and delivery of spare parts logistics services.
- Thames Water (U.K.), via an alliance with Andersen Consulting, plans to market logistics services to utilities through a new company called Connect 2020.

Financials

Andersen Consulting's total revenue grew to $5.30 billion in 1996, a 26% increase over revenue of $4.22 billion in 1995. Of this total, approximately 11% of revenue, or $582 million, was derived from outsourcing services.

The firm's Business Process Management organization, which provides the outsourcing services, achieved 46% revenue growth in 1996.

Although Andersen Consulting's fiscal year end is August 31, financial information is provided for the calendar year ending December 31 to conform with common reporting practices.

Market Financials

Andersen Consulting approaches the market via its industry practices, applying in-depth industry knowledge and experience to make the application of its competencies relevant to its clients' specific needs. The company targets vertical industries through its six industry practices. The global revenue contribution of each industry practice is indicated in Exhibit 3.

Exhibit 3

Andersen Consulting
1996 Source of Revenue Summary, by Industry Practice

Industry	Revenue ($M)	Percent of Total
Financial Services - Fin. Markets - Retail Finance - Insurance	$1,380	26%
Products - Consumer - Industrial - Process/Energy	$2,251	43%
Communications	$756	14%
Utilities	$368	7%
Government	$423	8%
Health Care	$115	2%
Other	$9	---
TOTAL	$5,302	100%

Source: Andersen Consulting

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Geographic Markets

Andersen Consulting provides services on a global basis. In 1996, approximately 55% of revenue was derived from the Americas, 35% from Europe, and the remaining 10% from the Asia/Pacific region. This regional breakdown of revenue has not changed significantly in the past three years.

Key Outsourcing Services

Andersen Consulting's outsourcing services are offered through its Business Process Management organization. The majority of clients are based in the U.S. and the U.K. The firm also has assignments across Europe, the Asia/Pacific region, and Latin America.

Characteristics of a Business Process Management relationship include:

- Long-term agreement for ongoing services
- Transition of people (in most, but not all cases)
- Services that integrate strategy, people, processes, and technology
- Technology
- Services that produce continuous improvement for the client

Andersen Consulting's business process improvement is derived from its methodology designed to turn internal functions into customer-oriented services. This methodology focuses on the process as a core business activity, applies expertise gained elsewhere, reengineers processes, and reshapes the organization into a top-quality service provider.

Business Process Management has four outsourcing offerings:

- *Business Process Outsourcing,* to manage and continuously improve an entire business process or a major subset for a client. Business processes that are candidates for outsourcing include financial management and logistics services.
- *Information Technology Outsourcing,* to manage and continuously improve the entire IT process for a client, including applications, data centers, and networks in a mainframe or client/server environment
- *Applications Management,* to develop, manage, and continuously improve sets of applications or newly built applications for clients, such as financial or human resources applications
- *Design, Build, Run*^{SM}, which includes all aspects of the client's business objectives—from strategy, design, and application development through the day-to-day management of desktop, network, and operations

Business Process Outsourcing

Andersen Consulting manages and continuously improves an entire business-critical process, sub-process, or function. At British Petroleum, Andersen Consulting enabled the client to address rising production costs and declining oil prices by transforming infrastructure functions—financial and administration services—into reliable, high-quality, cost-effective services. Costs were reduced by 30%, with an additional 20% reduction anticipated.

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Some of the business processes targeted for outsourcing include:

- Logistics
- Finance and Administrative Services
- Human Resources/Training
- Customer Care

Information Technology Outsourcing

As companies strive to optimize their technology investments while moving to new technologies, they call on Andersen Consulting to treat IT as a business process, similar to financial management or logistics. In some situations Andersen Consulting serves as a relationship manager, bringing together various specialists to meet the client's needs and providing a single point of contact for full IT outsourcing. In others, Andersen Consulting provides all the necessary services directly. Andersen Consulting also helps clients strengthen an internal capability through improved methods and redesigned processes, or starts from scratch to deliver a fully integrated solution that optimizes process transformation. The client obtains a new capability and continuous improvement in a long-term relationship.

For example, at LTV Corporation, Andersen Consulting manages the IS functions and is transitioning the client from mainframe computers to client/server technology. Additionally, Andersen Consulting has made arrangements for GE Capital to handle data processing services and for I-NET to provide network and desktop services.

Specific IT outsourcing services include:

- Client/server operations
- Application software management
- System software maintenance
- Project management
- Network management

Applications Management

Depending on the application, Andersen Consulting can handle either legacy or new systems to ensure continuous improvement, responsiveness to market needs, and high quality.

Since mid-1995, the firm has enjoyed strong growth in the applications management area, which now represents a large portion of its Business Process Management business. At J.P. Morgan, Andersen Consulting is responsible for applications development and maintenance support. And, for a major banking client, Andersen Consulting is maintaining a system used by financial institutions to manage trust accounts.

Design, Build, Run℠

Design, Build, Run℠ (DBR) is the total management of a client's enterprise-wide applications and systems environments, and also includes systems-critical design and build phases. It is founded upon shared risk with clients by tying Andersen Consulting's compensation to service level achievements.

This service focuses on achieving predictable, measurable results that are driven by the client's business requirements. In 1996, Andersen Consulting won contracts for DBR services with Dow Chemical and DuPont.

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Examples of Outsourcing Contracts

DuPont—Andersen Consulting won a $500 million, 10-year contract in December 1996 to manage software application development and network maintenance for the marketing, customer service, distribution, and manufacturing arms of DuPont's petroleum subsidiary, Conoco, and for DuPont's chemicals business. Approximately 500 of DuPont's employees will be transferred to Andersen Consulting. Andersen Consulting will be managing industry-specific applications for the petroleum and specialty chemicals industries.

Texas Instruments—Andersen Consulting will develop client/server software for use in key Texas Instruments business processes and will ultimately integrate and maintain Texas Instruments' client/server systems. Andersen is hiring approximately 250 Texas Instruments employees as part of the arrangement. Andersen Consulting's compensation is tied directly to delivering measurable results and achieving specific service levels over a five-year period.

British Petroleum (BP)—In March 1996, BP awarded Andersen Consulting a $120 million, 10-year contract to provide finance and administration services in the U.S. The agreement covers five major BP businesses in the U.S.: BP Exploration (BPX), BP Oil, BP Chemicals, Air BP, and BP Marine. This contract builds on an existing four-year relationship with BP Exploration in the U.K. for the on-site operation and management of its entire upstream accounting function. These services have resulted in a 30% reduction in costs for BPX.

Exhibit 4 provides a representative (partial) list of 1996/1997 Andersen Consulting outsourcing contracts.

Pricing

Pricing for Andersen Consulting's outsourcing services depends on the nature of the client relationship and the type of services being provided. In some cases, contracts are based on a fixed fee plus bonuses or penalties. Bonuses are based on incremental cost savings, increased revenues for the client, or delivering other measurable results and achieving specific service levels. Penalties occur if some elements of the contract are not fulfilled. Andersen Consulting Business Process Management promotes the implementation of value-based outsourcing arrangements. It is becoming increasingly common for both parties to share the benefit of linking performance with compensation, in risk/reward, profit-sharing, or other value-based arrangements. Relationships that generate lasting revenue streams for both client and vendor are gaining favor.

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Exhibit 4

Andersen Consulting
Representative 1996/1997 Outsourcing Contracts

Andersen Consulting Client	Industry	Award ($M)	Outsourcing Type	Duration
AMP (Australia)	Finance/Insurance	250.0	Applications Operations	5 Years
British Petroleum Americas	Process Manufacturing	120.0	Business Operations	10 Years
British Petroleum/Mobil Alliance (Pan-European)	Process Manufacturing	N/A	Business Operations	7 Years
Dow Chemical	Process Manufacturing	150.0	Applications Management	3 Years
DuPont	Process Manufacturing	500.0	Applications Management	10 Years
J.P. Morgan	Finance	NA	Applications Management	7 Years
Medical Products Company	Discrete Manufacturing	100.0	Applications Management	5 Years
Micro Compact AG (Germany) (Mercedes-Benz & Swatch/SMH)	Discrete Manufacturing	100.0	Applications Operations	6 Years
NY State Department of Social Services	State/Local Government	35.0	Application Management	4 Years
Pacific Bell	Communications	NA	Application Management/Marketing Agreement	NA
Ryder System, Inc. (Team w/IBM Global Services)	Discrete Manufacturing/ Transportation	1,400.0	Applications Operations	10 Years
Sears Plc	Retail	535.0	Business Operations	NA
Texas Instruments	Discrete Manufacturing	200.0	Applications Operations	5 Years

Source: INPUT's Outsourcing Contracts Database; Andersen Consulting

Alliances

Andersen Consulting has established alliances to promote its outsourcing business:

- In January 1996, Andersen Consulting, Canada and GE Capital Technology Services (GECTS) formed a joint marketing agreement for the Canadian market that parallels the 1995 U.S. alliance. Andersen Consulting will help companies manage and improve their entire range of IT capabilities and GECTS will provide large computer and client/server services. In addition, GECTS has acquired the assets and staff of Andersen Consulting's Etobicoke-based Operations Solution Center.

- In June 1995, Andersen Consulting and GE Capital Corporation formed a joint marketing agreement to pursue opportunities in the U.S. outsourcing market. Under the alliance, Andersen Consulting will help companies manage and improve their entire IT function, while GE Capital will provide processing services.

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Andersen Consulting and GE Capital intend to help clients optimize their technology assets and reduce their cost of ownership through the provision of financial solutions such as system leasing and rentals, acquisitions and other procurement services, data center operations, asset management, and upgrade and remarketing services.

Key Differentiators

- Vertical industry expertise
- Partnering approach
- Expertise in business process transformation and management
- Methodology
- Knowledge transfer
- Global presence
- Integration of process and technology with strategy
- Application development/management expertise
- Strategic alliance-building with both clients and other vendors

INPUT Analysis

Andersen Consulting is valued for its industry and business process expertise, which has driven the company's recent success in winning large outsourcing contracts. The company is in a position to leverage its change management skills in the industries characterized by significant change, such as telecom and finance, and also to leverage companies' increasing dependence on IT-based critical business processes.

The vendor's partnering strategy is paying off in a number of large contract awards, such as the $2 billion J.P. Morgan contract and the $500 million contract with DuPont. While Andersen Consulting must necessarily share these revenues with other vendors, the firm is committed to pursuing similar arrangements in the future because of the enhanced capabilities these partnering arrangements can deliver to the client.

The use of strategic alliances to increase capabilities and gain large outsourcing contracts should ensure future successes. Andersen Consulting will benefit, as well, from its use of partnerships with clients to develop new business within the client's industry, as in the case of the contract with Fiat New Holland.

Future challenges will involve continuing to meet demand for the many skills required of a full-services player, managing worldwide growth, and leveraging worldwide vertical market expertise to serve new clients and strengthen presence in prime markets.

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COMPANY
PROFILE

APPLIED BUSINESS TECHNOLOGIES, INC.
4631 West Chester Pike
Newtown Square, PA 19073
Phone: (215) 359-0700
Fax: (215) 359-1351

President:	David K. Moldoff
Status:	Private Company
Total Employees:	28
Total Revenue:	$2,500,000*
Fiscal Year End:	12/31/92

*INPUT estimate

Key Points

- Applied Business Technologies (ABT) provides its ABT CAMPUS[R] integrated software primarily to colleges and universities.
- The company has migrated its products to an open systems environment.
- During 1993, ABT released ABT CAMPUS 4.4, a SQL-compliant product for IBM compatible personal computers.
- ABT is also using Windows as a graphical user interface to ABT CAMPUS.
- Added on-line documentation is offered via a hypertext link.

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Company Description

Applied Business Technologies, Inc. (ABT), founded in 1976, develops, markets, and supports integrated software products for administrative, financial, and auxiliary applications to colleges, universities, and other not-for-profit organizations. The company also provides a range of professional services to its software customers.

Strategy

ABT's strategy is to move to client/server and use Windows as a graphical user interface.

Key Products and Services

INPUT estimates approximately 60% of ABT's 1992 revenue was derived from applications software products, 20% from associated support services, and 20% from professional services.

ABT CAMPUS[R] is an integrated on-line system designed to meet the information needs of colleges, universities, secondary schools, and other not-for-profit organizations.

- ABT CAMPUS runs on IBM PCs and compatibles and DEC VAX and MicroVAX computers. The software currently supports DEC VMS, XENIX, UNIX, MS-DOS, PC-DOS, and Novell Network operating systems.
- ABT CAMPUS' integrated modules include the following:
  - RECRUIT-DRIVE™ is a records management system for student recruiting and applicant processing by preparatory school, college, university, and graduate school admissions offices.
  - RECORDS-DRIVE™ is a records management system for school registration and grade processing for academic and registrar offices.
  - FINANCE-DRIVE™ is a financial management system for student billing, disbursements, fund accounting, and cash receipts.
  - FUND-DRIVE™ is a fund-raising management system.
- ABT CAMPUS modules are written in BASIC. The source code is available.
- ABT has installed over 200 packages at 60 customer sites.

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Professional services provided by ABT include the following:

- Data conversion services.
- Analysis and programming to customize software to specific client requirements.
- Consulting.
- Education and training.

Industry Markets

Colleges and universities account for approximately 85% of ABT's revenue. The remainder of revenue is derived from other not-for-profit organizations, including hospitals, museums, orchestras, and zoos.

Clients

Georgian Court College (Lakewood, NJ) is an ABT client.

Geographic Markets

One hundred percent of ABT's revenue is derived from the U.S.

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COMPANY
PROFILE

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APPLIED COMMUNICATIONS, INC.

330 South 108th Avenue
Omaha, NE 68154
Phone: (402) 390-7600
Fax: (402) 330-1528

President & CEO:	William E. Fisher
Status:	Subsidiary
Parent:	Tandem Computers
Total Employees:	550 (9/92)
Total Revenue:	$80,000,000*
Fiscal Year End:	9/30/92

* INPUT estimate

Key Points

- Applied Communications, Inc. (ACI) pioneered the development of software for electronic funds transfer (EFT) systems that allow consumers to make purchases with credit and debit cards or use automated teller machines to access their bank account 24 hours a day.

- In April 1991, U S WEST sold ACI to Tandem Computers. This move leverages ACI's long-term strategic alliance with Tandem as a partner in developing software platforms and connectivity standards for open integration on Tandem systems.

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Company Description

ACI develops, markets, and supports software products for automated teller machine (ATM) and point-of-sale (POS) networks and manned teller, wire transfer, cash management, and automated clearinghouse (ACH) applications.

The company also provides custom software development, consulting services, and facilities management (systems operations) services.

Company History

ACI was founded in 1975 to develop customized applications software systems for retail banking networks.

In July 1986, ACI was acquired by U S WEST for approximately $120 million. ACI had approximately 285 employees at the time of the acquisition and revenue of $29.3 million for the fiscal year ending September 30, 1985.

In September 1990, ACI sold certain wire transfer and ACH processing software to Stockholder Systems, Inc. The products included WireNet™, MoneyNet Micro™, TRG/TRC™, and CIX-PC™ PC-based systems, and CIX™ for IBM mainframe platforms.

ACI operated as a wholly owned subsidiary of U S WEST until April 1991, when it was acquired by Tandem.

- US WEST sold ACI to Tandem in a non-monetary exchange. Tandem agreed to deliver computer systems and related consulting services to U S WEST through April 30, 1995.
- The transaction was valued at approximately $56 million.

In October 1991, ACI Telecom, an operating division of ACI, became part of Tandem's wholly owned subsidiary, Tandem Telecommunications Systems. ACI Telecom designs and develops applications software for enhanced services, information services, and intelligent network marketing to the telecommunications industry.

Financials

In the five-year summary that follows, ACI's revenues for fiscal 1992 and 1991 are based on a fiscal year ending September 30, the same as Tandem's. Prior years' results reflect a December 31 fiscal year end, the same as U S WEST's.

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APPLIED COMMUNICATIONS, INC.
FIVE-YEAR REVENUE SUMMARY
($ millions)

	FISCAL YEAR				
ITEM	9/92	9/91	12/90	12/89	12/88
Revenue	$80.0*	$78.0*	$76.1	$72.8	$68.1
· Percent increase from previous year	3%*	2%*	5%	7%	22%

* *INPUT estimates*

Alliances/ Joint Ventures

ACI has a joint venture with TXN Solution Integrators of Toronto (Ontario, Canada).

ACI has an alliance with Atalla Corporation to sell manned teller delivery systems using ACI's BASE24-teller software and Atalla's Customer Transaction Terminal.

ACI also has worldwide product distribution rights with the following companies:

- Insession--to market ICE, an IBM connectivity solution for Tandem hardware users
- Sierra Software, Inc.--to market Sierra's NonStop SQL data base management and access products
- Systems Center, Inc.-- to market System Center's Network DataMover-Tandem (NDM-Tandem) software that facilitates the transfer of data between IBM mainframes and Tandem computers
- Gasper Corporation--to market Gasper's Automan family of PC-based products that automate the monitoring of ATM networks
- European Card Services--to market its Tandem-based GEN90 credit card management system

Employees

ACI currently has about 550 employees, of which about one-third work in product research and development and one-third in customer service and support positions.

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Key Products and Services

INPUT estimates approximately 80% of ACI's revenue is derived from its software products and support services and 20% from professional services (consulting, custom, education).

ACI's software products are used by more than 250 customers in 42 countries.

Retail Banking Systems:

ACI's BASE24 product family is an integrated group of modular software products designed for POS, ATM, and manned teller functions.

- BASE24 products run on the full range of Tandem NonStop computers and offer support for nearly every major ATM and POS terminal. BASE24 software interfaces with more than 90 EFT interchanges.

- BASE24 products include the following:

  - BASE24-atm[R] is an ATM transaction processing system designed to support all major brands of ATMs. This product drives terminals, performs authorizations, and conducts switching functions.

  - BASE24-pos[R] is a point-of-sale product that allows financial institutions and retailers to directly debit customer bank accounts or authorize credit transactions.

  - BASE24-teller[R] is a manned-teller transaction processing system that allows financial institutions to automate their branch teller operations, allowing on-line access to a common data base shared by other EFT services.

  - BASE24-menu+™ is a software connectivity tool that allows a user to access a variety of host and front-end resident applications from a single front-end terminal.

  - BASE24-pcs[R] is an on-line problem control system designed to monitor EFT networks.

  - BASE24-span[R] is a transaction routing product that allows the user to link several copies of a single BASE24 product or to combine different BASE24 products to accommodate growth.

ACI's Check Authorization and Courtesy Card electronic payment systems can be used alone, in conjunction with one another, or in

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conjunction with BASE24-pos software for authorizing credit and debit card transactions. The systems operate on Tandem computers.

LINK24R is a CICS-based system that provides the interface between BASE24 and host applications. It is designed for IBM mainframe customers who have installed or are scheduled to install BASE24 as a front-end or back-end processor.

Corporate Banking Systems:

ACI also offers Tandem-based corporate banking software, including wire transfer, cash management, and ACH systems.

- CO-ach™ (Cooperative ACH Processing) automates clearing, settlement, and distribution of electronic debit and credit transactions for large and small institutions.

- Cash Management Plus™ is an information reporting and transaction initiation package that functions as an electronic gateway to allow authorized bank customers real-time access to numerous corporate banking applications.

- MoneyNet™ provides automated funds transfer processing, including money desk processing, multibank processing, international S.W.I.F.T. and TELEX support, risk management control, corporate access services, and ongoing regulatory compliance and systems enhancements.

Professional Services/Facilities Management:

ACI's Project Management and Implementation Program (PMIP) provides customers with a range of support services, including product integration reviews, development of specification documents and project plans, site preparation, testing and go-live support, project management, product consulting throughout the project cycle, and in-depth training.

ASTech is ACI's service support group that provides operations analysis, capacity planning, system performance reviews, and short- or long-term on-site technical assistance.

- The focus of ASTech's on-site assignments is on BASE24 product implementation support; supplemental operational staffing; and assistance with software maintenance, project management, and programming.

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- ASTech provides and/or coordinates custom education and documentation efforts, several different software maintenance plans, and on-site support for hardware and software upgrades.

ACI Facilities Management supplies network and operations management for Tandem systems, including installation, maintenance, staffing, training, and daily on-site support.

Industry Markets

Approximately 87% of ACI's revenue is derived primary from banking and finance, 8% from retail, and 5% from other industries.

ACI customers include 53 of the 100 largest banks in the U.S., 5 of the 10 largest in the U.K., and the 3 largest banks in Canada and Australia.

ACI customers also include retailers such as JCPenney, Target Stores, ARCO, Texaco, and Caltex Oil.

Geographic Markets

Approximately 50% of ACI's revenue is derived from the U.S. and 50% from international sources. Customers are located in 42 countries worldwide.

ACI maintains U.S. sales offices in Chicago (IL), Cincinnati (OH), Denver (CO), Jacksonville (FL), Omaha (NE), and Pittsburgh (PA).

ACI has international subsidiaries in the U.K., Canada, and Singapore. In January 1992, ACI acquired BASE24 Ltd., its joint venture company located in Watford (England), resulting in the addition of 135 employees.

ACI has distributors in Argentina, Canada, Chile, Colombia, France, Greece, India, Indonesia, Japan, Mexico, Peru, the Philippines, Spain, South Korea, Taiwan, Turkey, Guatemala, Uruguay, and Venezuela.

Computer Hardware

ACI has Tandem systems installed at its data center for product development and customer support.

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COMPANY PROFILE

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THE APL GROUP INC.

644 Danbury Road
Wilton, CT 06897
Phone: (203) 762-3933
Fax: (203) 762-2108

Chairman:	George Brigham
President:	Stuart Sawabini
Status:	Private Corporation
Total Employees:	20
Total Revenue:	$3,500,000*
Fiscal Year End	12/31/92

*INPUT estimate

Key Points

- The APL Group is a leading provider of Qualedi R PC-based EDI software and trading partner assistance services.
- APL has targeted its Qualedi product to be the premier PC-based translator for companies wanting to integrate EDI with existing software applications. These applications may be running on other than PC platforms.
- APL claims that the underlying relational data base structure of its EDI translator provides the flexibility to respond quickly to changes in the standards.
- APL's strengths include good product quality and good customer support. Also, principal Dan Codman is intimately involved with EDI standards development committees (ANSI X12 and EDIFACT) worldwide, giving APL greater exposure and allowing the company to be cognizant of new standards and standards-related developments.
- During 1992, APL expanded its EDI professional services operations with the acquisition of Cornerstone EDI Services Group.
- APL's Qualedi EDI translation software has been reviewed and approved for use within the health care industry by the Healthcare EDI Corporation. Qualedi is currently installed in over 18 industries across the U.S.

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Company Description

The APL Group was founded in 1983 by George Brigham and Daniel Codman for the sole purpose of developing software for electronic data interchange (EDI).

During 1992, APL acquired Cornerstone EDI Services Group, an EDI professional services organization providing consulting, education, implementation, and systems integration services.

APL is currently organized into two divisions as follows:

- The Quadeli Software Division markets and supports the company's Qualedi EDI PC-based translation software.
- The Cornerstone EDI Resources Division provides EDI-related professional services.

Alliances

APL has an alliance with Sterling Software whereby APL can refer the Sterling EDI network to APL prospective EDI software customers.

APL is strategically allied with Greentree Software (New York, NY) which produces CAP3 Computer Assisted Purchasing software. The alliance is intended to provide complete EDI capability to purchasing professionals.

APL is also allied with TanData Corporation (Tulsa, OK), a small package shipping software development corporation.

Key Products and Services

Approximately 75% of the company's revenue is derived from software products and 25% from professional services.

Qualedi, originally introduced in 1984, is a micro-based translation software product supporting all public EDI standards. The software is now at release 10.

- Qualedi has standards-compliance verification abilities. At each level of the EDI transmission (interchange level, group level, and transaction set level) Qualedi verifies that all data elements and segments adhere to the standards. If errors appear, they are reported and in some instances corrected.
- The product supports unattended scheduled operations.
- The Qualedi front-end acts as either a front-end to a mainframe or mini, or as a standalone workstation. It features modes for testing

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the mainframe interface and new correspondents. The front-end sells for $3,200.

- The Qualedi service bureau is an enhanced mode of the front-end. The user of the system is not the sender or receiver of the documents, as in the front-end mode, but serves instead as the service bureau for a number of internal correspondents who are the real senders and receivers. The user system is, in this case, an interface between multiple internal and multiple external correspondents.

- Data mapping capabilities allow for two types of record formats: fixed position and variable length.

- The multiple-correspondent workstation enables the PC to act as a standalone, key-entry terminal for sending and receiving EDI documents with any number of trading partners. The multiple-correspondent workstation sells for $2,500.

- The single-correspondent substation is used for communicating with only one correspondent, and sells for $1,650.

- Qualedi operates on any MS-DOS PC/XT-, AT- or 386-compatible microcomputer equipped with a serial port, an internal clock, 640K of RAM and 10-megabyte hard disk, a monochrome monitor, and an 80-character printer. A modem and communication software are required for communications.

- Qualedi supports the following standards: ANSI X12 (all industries, including CIDX, AIAG, CDX, VICS); UCS (grocery/retail); WINS (warehousing); TDCC (transportation); and EDIFACT (international).

- Data communications networks supported by the product include the following: Advantis, BT North America, Transettlements, Ford, Telecom Canada, AT&T, Ordernet, Kleinschmidt, GE Information Services, and Railinc. Additionally, the software supports point-to-point implementations.

- APL participates in the IBM Business Partner Program; it is on BT North America's Alliance Partner program; and it signed a national cooperation agreement for marketing, sales, and implementation with AT&T.

- Communications software supported by Qualedi is dependent on which of the 10 networks the customer uses.

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The APL Group also provides professional services such as customization and consulting services, in addition to providing its customers with installation services, a tutorial demonstration, and hotline support. On-site installation/support/training costs $500 per day plus travel expenses. Monthly EDI education classes cost $275 per day per person.

Industry Markets

Qualedi has been installed in over 18 different industries, including retail, aerospace, grocery, telecommunications, airline, utility, chemicals, manufacturing, transportation, health care, and distribution.

The product has generic capabilities that allow its use in any industry that has endorsed national standards.

Geographic Markets

The APL Group sells directly and through VAR distribution channels. VARs are responsible for approximately 10% of sales. The company has installations in the U.S. and Canada.

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Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

August 1996

Applix, Inc.

President & CEO: Jitendra S. Saxena
112 Turnpike Road
Westboro, MA 01581
Phone: (508) 870-0300
Fax: (508) 366-2278
Internet: http://www.applix.com

APPLIX

Status:	Public
Employees:	234 (12/95)
Revenue (FYE 12/31/95):	$32,340,000
Revenue: 6 months ended 6/30/96:	$22,903,000

Key Points

- Applix, Inc. develops, markets, and supports software tools and applications for enabling the Real Time Enterprise: those organizations that seek to gain competitive advantage by converting raw data into effective action in the shortest possible time.
- In June 1996, Applix announced the Applix Any*ware* family of products, the first commercial application solutions to leverage Java to develop and deploy interactive business applications to networked desktops.
- Also in June 1996, Applix announced Applix*ware* to FAME Link and Applix*ware* Real Time DDE Server and Applix*ware* Real Time Subscribe (RTS) to Microsoft Excel.
- In May 1996, Applix and Red Hat Software announced the availability of the Applix*ware* suite of products for the Red Hat LINUX operating system.
- In January 1996, Applix announced that Duetsche Bank was installing Applix Real Time Spreadsheets in its trading rooms worldwide.

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- In December 1995, Applix signed a total enterprise and integration agreement with Ericsson.

- In October 1995, Applix acquired Target Systems Corporation, a developer of support automation software.

Company Description

Founded in 1983, Applix is a worldwide provider of solutions for the Real Time Enterprise: those organizations that seek and gain competitive advantages by converting raw data into effective action in the shortest possible time.

- Real time enterprises access data from dynamic, continuous data streams, instantly analyze the options, make decisions, and communicate results.

- Applix markets its products as a set of enterprise tools for building real time-decision support applications and improving customer interaction capabilities.

- Applix's primary product software includes Applix*ware*, Applix Enterprise, and Applix Any*ware*.

Organization and Structure

Applix is headquartered in Westboro (MA) and maintains domestic sales offices in Dallas (TX), San Jose (CA), New York (NY), and Washington D.C.

The company also has a network of wholly owned international subsidiaries in France, Germany, the Netherlands, Canada, and the U.K.

Applix's key executives are listed below:

Applix, Inc. Key Executives

Name	Title
Jit Saxena	President & CEO
Richard Davis	EVP Sales & Marketing
Patrick Scannell, Jr.	VP Finace/Administration & CFO
Craig Cervo	VP Product Development
Barry Zane	VP Technology
James R. Murphy III	VP Technology, Applix Enterprise
V. Anthony Giannelli	VP Business Development & Marketing
Barry Burke	Director Strategic Product Planning

Financials

Applix's 1995 revenue reached $32.3 million, a 75% increase over 1994 revenue of $18.5 million. Net income was $0.6 million, compared to $1.4 million in 1994.

- Applix enjoyed growth in both sectors of its business during the 1995 fiscal year, but company financial results suffered an overall decline compared to fiscal 1994 because of a one-time $6.2 million charge resulting from the acquisition of Target Systems.

- A three-year financial summary follows:

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Applix, Inc.
Three-Year Financial Summary
($ Millions, except per-share data)

	Fiscal Year		
Item	1995	1994	1993
Revenue	$32.3	$18.5	$9.5
• Percent change from previous year	75%	95%	N/A
Income (loss) before taxes	$0.6	$1.4	$(0.4)
• Percent change from previous year	(60%)	450%	N/A
Net income (loss)	$0.6	$1.4	$(0.4)
• Percent change from previous year	(a) (60%)	450%	N/A
Earnings (loss) per share	$0.07	$0.20	$(0.34)
• Percent change from previous year	(70%)	160%	N/A

(a) Includes a one-time charge of $6.2 million related to the Target Systems acquisition.

Revenue Analysis by Product/Service

Approximately 73% of Applix's 1995 revenue was derived from software licensing a 27% from support services.

In fiscal 1995, Applix experienced growth in both licensing and services.

- Domestic license revenue increased 54% to $13 million, compared to $7.1 million for the same period in 1994. This increase resulted primarily from sales generated from the financial services sector.
- Service revenue increased 149% to $8.7 million, due to increased maintenance revenue from Applix's growing customer base, and to the company's increased emphasis on selling training and consulting services.
- A three-year summary of source of revenue is shown below:

Applix, Inc.
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	1995		1994		1993	
Product/Service	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Licensing	$23.7	73%	$15.0	81%	$10.4	86%
Services	8.7	27%	3.5	19%	1.7	14%
Total	$32.4	100%	$18.5	100%	$12.1	100%

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Interim Results

Revenue for the six months ending June 30, 1996, was $22.9 million, a 72% increase over $13.3 million for the same period in 1995. Net income for the first six months of 1996 was approximately $3.8 million ($0.35 per share), a 71% increase.

Market Financials

Applix derives its revenue primarily from the financial services, manufacturing/engineering, and telecommunications industries, and the federal government

Geographic Markets

Approximately 55% of Applix's 1995 software license revenue was derived from North America and 45% from international sources.

A three-year geographic summary of source of license revenue follows:

Applix, Inc.
Three-Year Geographic Source of License Revenue Summary
($ Millions)

	Fiscal Year					
	1995		1994		1993	
Geographic Market	License Revenue $	Percent of Total	License Revenue $	Percent of Total	License Revenue $	Percent of Total
North America	$13.0	55%	$7.1	48%	$7.0	67%
International	10.7	45%	7.9	52%	3.4	33%
Total	$23.7	100%	$15.0	100%	$10.4	100%

Acquisitions

In October 1995, Applix acquired Target Systems Corporation, a Marlboro (MA)-based developer of support automation software, for approximately $6 million.

- Target Systems developed support automation software for help desks, customer service, and asset tracking applications.
- Its Target Enterprise product line is now the core of Applix's Enterprise products.

Divestitures

In December 1995, Applix announced a two-for-one split of the company's outstanding common stock. The split was effected in the form of a 100% stock dividend.

Employees

As of December 31, 1995, Applix had 234 employees, segmented as follows:

Marketing and sales	53
Customer support	39
Finance and administration	26
International subsidiaries	55
Other	61
	234

Key Products and Services

Applix products are geared toward providing solutions for organizations that seek and gain competitive advantage through converting

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raw data into action in the shortest possible time.

Applix develops, markets, and supports real-time products, including the Applix*ware*, Applix Enterprise, and Applix Any*ware* family of products.

*Applix*ware

Applix*ware* for the Real Time Desk is an open suite of integrated personal desktop tools, developed for both UNIX and Windows NT, that enable individual users with time-critical and historical data needs to access, analyze, display, and communicate information from a universal desktop across heterogeneous client/server environments, including the Web. Applications in the Applix*ware* family product line include:

- Applix Real Time, a secure, high-performance gateway to accessing real-time data, can be used to link "live" data feeds to Applix spreadsheets with Real Time Desk. Real Time is priced at $1,995 per concurrent user, and is available in versions that integrate directly with the Reuters Triarch 2000, Teknektron TIB, Micrognosis MIPS, Market Vision Link System, Bridge Data Exchange, and Bloomberg data distribution systems.

- Applix Builder is a cross-platform development tool for building, deploying, and renewing scaleable, real-time decision support applications. Applications built with Applix Builder can access live information from any real-time data source available through Applix Real Time. Applix builder is priced at $2,495 per concurrent user.

- Applix Spreadsheets is a customizable, graphical spreadsheet that offers a full-function, 3-D analysis and modeling tool. Applix Spreadsheets supports "live links" to other Applix*ware* modules, including Applix Real Time and Applix Data. Priced at $695 per concurrent user, Applix Spreadsheets includes filters to support file interoperability and live links with Microsoft Excel and Lotus 1-2-3.

- Applix Words is a customizable, graphical word processor and desktop publisher that serves as the underlying framework for compound documents. Priced at $695 per concurrent user, Applix Words offers forms capability, information object embedding, live links with other Applix*ware* products, customer-developed applications, and third-party applications.

- Applix Graphics is a full-feature drawing, charting, and graphics editing package priced at $195 per concurrent user.

- Applix Presents is a full-featured, cross-platform UNIX and Microsoft Windows NT presentation environment. Priced at $495 per concurrent user, Applix Presents provides tools for the creation of presentations that can be authored and viewed on a variety of workstations, distributed directly on the network or linked to enterprise applications.

- Applix Data is an application that enables information stored in Oracle, Informix, Sybase, and CA-Ingres databases to be live-linked into other Applix*ware* applications. Priced at $995 per concurrent user, Applix Data allows users to graphically query, access, update, and share information.

- Applix Mail and OpenMail electronically send and receive both Applix*ware* documents and non-Applix files from the workgroup to locations around the world. Applix Mail can automatically filter Applix*ware* documents, spreadsheets, and graphics files into desired file formats

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specified for each recipient. The price for Applix Mail and Applix Open Mail is $195 each per concurrent user.

- Applix HTML Author provides development of documents for the Internet or the Web. Retailing for $195 per concurrent user, Applix HTML Author can automatically convert existing Applix Words documents to HTML templates or map selected document styles to HTML.

Applix Enterprise

Applix Enterprise is an integrated set of support automation applications for handling the data needs of customer interaction environments.

Applix Enterprise software is designed to be compatible with leading packages for network management, automated asset collection, notification technologies, and E-mail.

Products in the Applix Enterprise line include:

- Applix HelpDesk, a graphical call tracking and inquiry management application designed for internal customer support operations through tailorable work flow and resolution technologies. Applix HelpDesk is priced at $1,095 per concurrent user.

- Applix Service is a graphical problem-management application designed for external customer support. Priced at $1,095 per concurrent user, Applix Service includes the ability to track multiple contacts per customer, Service Level Agreements, and Return Material Authorizations.

The Applix Enterprise product line also includes the following interfaces:

- Applix WebLink allows real-time access to an organization's support center to create a virtual service environment that meets customers' demands more effectively.

- Applix SupportLink gives customers direct computer access to an organization's support center to log, research, and resolve questions and problems on their own.

- Executive Information Center provides managers and executives with a concise understanding of an organization's operations.

- Applix LifeLine/HA guarantees the operation of an organization's support center even in the event of network or server failure.

- Applix Mobile allows information to be processed and updated without direct connection to the central database.

*Applix Any*ware

The Applix Any*ware* family of products is a commercial applications solution that utilizes Java™ technology to build and deploy interactive business applications to networked desktops. Products in the Applix Any*ware* product line include applications, server products, and tools.

Applications include the following:

- Applix Any*ware* WebSheet is an interactive, graphical, Webtop spreadsheet with the ability to access real-time and historical data from relational and multidimensional databases. Priced at $295 per concurrent user, WebSheet is fully compatible with Applix Spreadsheets, and can import and export Microsoft Excel and Lotus 1-2-3 spreadsheets.

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Server products include the following:

- Applix Any*ware* Server is the base platform for all Any*ware* applications. At least one server per site is required, although multiple servers can be used to provide load balancing for large user communities and complex applications. Priced at $4,995 per concurrent user, Any*ware* Server components include:

  - Any*ware* Applications Server Software, which provides the platform to publish both content and interactive applications directly to Java-enabled platforms

  - Any*ware* HTTP Server Integration Software, which initially supports Netscape's family of UNIX-based HTTP servers via a shared NSAPI library

  - Any*ware* Server Configuration Templates and Tools provide utilities to install, maintain, and operate the Any*ware* server software.

  - Any*ware* Client Software includes all necessary Java class files and Any*ware* on-line documentation and help necessary for client access to the Any*ware* Server and all Any*ware* applications.

- An Applix Any*ware* WebData Gateway License is required, at $195 per concurrent user, for each user that requires access to an Any*ware*-supported SQL relational database.

- Applix Any*ware* WebRealTime Gateway is priced at $995 per concurrent user and is required for each concurrent user that requires real-time data.

Tools include the following:

- Applix Any*ware* Innovators Workbench provides a suite of application development tools and utilities required for building and deploying custom solutions with Applix Any*ware*. A single license is required for each concurrent Any*ware* developer, at $2,495 each.

- Applix Any*ware* WebSheet Innovators Extension to the Innovators Workbench adds the ability to create custom spreadsheet-based applications, including embedded graphics, buttons, and macros. This product is licensed at $695 per concurrent user.

- Applix Any*ware* WebRealTime Innovators Extension is for developers creating RealTime applications and, with the base Innovators Workbench or used with the Any*ware* WebSheet, provides access to any supported RealTime Gateway for development and testing. This product is licensed at $1,995 per concurrent developer.

- The Applix Any*ware* WebSheet Starter Kit contains the Applix Any*ware Server*, a single license for the Applix Any*ware* Innovators Workbench and the Applix Any*ware* WebSheet Innovators Extension, and ten concurrent user licenses for the Applix Any*ware* WebSheet and Applix Any*ware* WebData. This Starter Kit is priced at $995.

Clients

A sample of Applix's customers include Motorola, NASD, Panasonic, Societe Generale, The Swiss Bank Corp., Bank of Boston, and First Union National Bank.

Additionally, Applix recently reached two agreements with major clients:

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- Ericsson signed a total enterprise and integration agreement with Applix under which all components of Applix*ware* and Applix Builder will be made available to Ericsson employees and customers.

- Deutsche Bank AG is installing Applix Real Time Spreadsheets on its IBM RS/6000 workstations worldwide.

Marketing and Sales

Applix has historically focused its marketing efforts on four industry sectors: financial services, manufacturing/engineering, telecommunications, and the federal government, because these markets require prevalent use of 32-bit open computer systems (UNIX and NT workstations and servers) and depend on information analysis and dissemination.

Applix markets its products in North America primarily through a direct sales force. Additionally, the company's sales force works on occasion with strategic marketing partners and resellers.

Alliances

Applix has strategic marketing relationships with leading vendors and systems integrators within targeted industry sectors.

A sample of Applix's partnerships include Dow Jones Telerate, Allen-Bradley, Market Vision, Reuters, TIBCO, and Westinghouse.

Applix also has strategic relationships with a number of companies including Bloomberg, Digital Equipment Corporation, Hewlett-Packard, IBM, Informix Software, Netscape Communications, Oracle, Silicon Graphics, Sun Microsystems, and Sybase.

Additional strategic relationships and alliances include:

- Red Hat Software and Applix have an agreement under which Red Hat bundles Applix*ware* 4.2 with the commercially available version 3.03 of Red Hat LINUX.

- The Math Works, Inc. and Applix have an agreement under which the companies will co-market Applix Link, an interface between their respective MATLAB and Applix*ware* products.

- Applix and FAME have a cooperative marketing agreement that includes joint promotion, seminars, and a sales incentive program.

- Applix has a strategic relationship with Benton Associates, a consulting firm based in Toronto, to provide customers with consultation in the use of Applix*ware* technology and FAME time series data.

Competition

Applix faces competition from various sources with respect to each of the individual applications included in Applix*ware*.

Applix Real Time competes with Lotus Realtime and WingZ RealTime. The other Applix*ware* applications compete primarily with office automation and data access products offered by companies such as Novell, Microsoft, Lotus, Clarity, Frame, Oracle, and Sybase.

Applix Enterprise products compete primarily with products from Remedy, Clarify, Scopus, and Astea.

Applix Any*ware* products compete with applications developed in-house.

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INPUT Assessment

Applix's strengths include:

- Comprehensive product offerings
- The extensive use of company products by major financial and governmental institutions
- Leadership in the evolving real-time information processing market
- Applix Any*ware*'s Java™ foundation
- Access to a range of data services, relational real-time, and historical data
- Full cross-platform compatibility
- Multilingual product support

Challenges for the future include:

- Competition from established industry players (Microsoft, Novell, Oracle, Sybase)
- Integrating and expanding the Applix Enterprise product line
- Maintaining an innovative position in a rapidly changing and immature market

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Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

February 1996

Arkansas Systems, Inc.

Chairman: Dr. James K. Hendren
President & CEO: Donald B. Hatfield
8901 Kanis Road
Little Rock, AR 72205
Phone: (501) 227-8471
Fax: (501) 227-5436

ARKANSAS SYSTEMS

Status:	Private
Employees:	130 (2/96)
Revenue:	$12,000,000*
Fiscal Year End:	12/31/95

** INPUT estimate*

Key Points

- Arkansas Systems, Inc. offers software products for the midrange and PC-LAN computer market.
- Over the past several years, Arkansas Systems has increased its focus on payment and financial transaction delivery systems to the retail banking and finance industry.
- A strong area of business growth has been the international market. Approximately 60% of revenue is now derived from international sources.
- In January 1996, Arkansas Systems announced that Donald B. Hatfield, a former executive of ALLTEL Information Services, had been named president and CEO. Dr. James K. Hendren, formerly president of Arkansas System, has become chairman of the board and continues his management capacity as senior vice president and chief administrative officer.
- In 1995, Arkansas Systems released its Integrated Debit Card System (IDCS) that allows financial institutions to issue and process MasterCard, VISA or private label debit cards.
- Arkansas Systems also announced the release of Flexi-Check II and Flexi-Remittance II—image solutions for the company's item processing systems.

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Company Description

Arkansas Systems, incorporated in 1975, provides software products and professional services for IBM midrange and PC-LAN systems. Products are currently provided primarily to the retail banking, finance and payment systems industries.

Arkansas Systems currently has experience with approximately 1,400 customers in 63 countries worldwide.

Company Strategy

Arkansas Systems' strategy is to market and support electronic banking products, including electronic funds transfer (EFT) and automated teller machine (ATM) and item processing products for midrange and PC-LAN systems. Arkansas Systems is taking advantage of the growing use of IBM AS/400 and PC-LAN systems in the finance market to get distributed systems out quickly to financial institutions and enterprises of all sizes.

Arkansas Systems is pursuing business worldwide, serving banks from Asia, Europe, Latin America, the Caribbean and the U.S.

Arkansas Systems is developing new technologies in the areas of networking, image-based processing, fax integration, home banking, smart cards and electronic bill payment.

Financials

INPUT estimates Arkansas Systems' 1995 revenue approximated $12 million, up 20% over 1994 revenue. A five-year revenue summary follows:

Arkansas Systems, Inc.
Five-Year Revenue Summary *
($ Millions)

	Fiscal Year				
Item	1995	1994	1993	1992	1991
Revenue	$12.0	$10.0	$8.4	$7.8	$6.5
• Percent change from previous year	20%	19%	8%	20%	--

* *INPUT estimates.*

Market Financials

Arkansas Systems derived approximately 95% of its 1995 revenue from the banking and finance industry and 5% from state and local government.

Geographic Markets

Approximately 40% of Arkansas Systems' 1995 revenue was derived from the U.S. and 60% was derived from international sources.

Arkansas Systems' U.S. office is in Little Rock. In late 1995, the company began construction of a new corporate facility in west Little Rock, scheduled for completion in late 1996. The company also has offices in Budapest (Hungary) and Moscow (Russia).

Outside the U.S., Arkansas Systems has clients in 63 countries throughout Central and South America, the Caribbean, Eastern Europe, Asia, the Middle East and the Asia/Pacific.

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Acquisitions

In mid-1994, Arkansas Systems acquired VICAPS (Visa International Card Authorizing and Processing System)—the largest IBM AS/400-based credit card issuing and processing package—from Visa. The product has been renamed ICCS (Integrated Credit Card System) and is integrated into the company's other products.

Employees

Arkansas Systems currently has 130 employees, segmented as follows:

Marketing and sales	20
Technical	80
General and administrative	20
Other	10
	130

Key Products and Services

Arkansas Systems provides solutions to improve the effectiveness of payment and financial transaction delivery systems worldwide.

In 1991, the company re-engineered its software offerings creating a unified suite of products known as Integrated Transaction Management (ITM) solutions.

- The ITM concept provides additional functionality by offering financial institutions the ability to combine and integrate numerous payment and financial transaction delivery systems.

- Other software offered with the ITM suite includes ATM Management, POS Management, Teller Terminal Management, Integrated Credit Card System, Integrated Debit Card System, item processing applications, remittance processing applications, clearinghouse applications, EFT network solutions and communications applications.

- The products support AS/400 and PC-LAN platforms.

- Product pricing depends on the IBM host, type and model, protocol requirements and device or network selected.

Arkansas Systems' products are summarized in the exhibit on the following page and include the following:

- ITM/PC, the PC-LAN version of ITM, is a multitasking solution that provides a graphical user interface (GUI). It is open-ended and interfaces with most operating platforms and other core accounting software.

- ATM Management supports communications between a S/3X, AS/400 or PS/2 and any type of ATM terminal in both proprietary and shared networks.

- Integrated Bill Payment System allows an institution's customers to pay bills and perform other banking transactions or inquiries from a touch-tone telephone or ATM.

- The Batch EFT Network Connection System provides periodic batch communications with the institution's chosen EFT network. The institution's host computer receives periodic ATM transactions from the EFT network.

- The Online EFT Network Connection System is a client/server solution that provides continuous communication between the financial institution and the EFT network for real-time transaction authorization or denial.

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Exhibit

Arkansas Systems Software Products

Product	Year Introduced	Number Installed	Pricing
ATM Management System	1981	+550	$20,000 - $50,000
POS Management System	1991	+10	(a)
Banking Customer Information System	1981	20	$6,500
Intercept Processing System	1982	+72	(a)
MICR/Proof Interface	1984	50	$7,000 - $15,500
Teller Terminal Management System	1982	125	$12,500 - $75,000
Flexi-Net	1988	15	(a)
Flexi-Check	1988	+75	$13,000 - $90,000
Flexi-Check II	1995	New	(a)
Flexi-Lockbox	1990	+10	(a)
Flexi-Remittance	1989	10	(a)
Flexi-Remittance II	1995	New	(a)
Tele-Banking System	1988	30	$14,500 - $45,000
Integrated Transaction Management	1991	+80	$30,000 - $500,000
Integrated Credit Card System	1994	+40	(a)
Integrated Debit Card System	1995	+5	(a)
Integrated Bill Payment System	1994	5	(a)
Client ACCESS Solutions	1995	New	(a)
Clearinghouse System	1994	7	(a)
Image Signature Verification	1995	New	(a)
Multi-bank Shared EFT Network	1989	15	$55,000 - $500,000
Batch or Online EFT Network Switch Interface System	1982	450	(a)
DES-Mate External Encryption Device	1988	50	(a)
Enhanced Problem Annunciator Product	1989	+30	(a)
PATH Communication Controllers	1985	400	$6,000 - $10,000

(a) Pricing available on request.

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- The Intercept Processing System allows a financial institution to handle its own cardholder's transactions from its ATMs without accessing an external EFT network. An on-line link is provided to route foreign cardholder transactions at the host institution's ATMs to the EFT network.

- Tele-ACCESS provides an institution's customers with 24-hour, seven-day-a-week access to banking services via a touch-tone telephone or rotary dial telephone.

- The Flexi-Check System is a check processing system with modules that can be separately authored to fit specific processing requirements.

- Flexi-Remittance System is designed to process remittance payment documents with high-speed reader-sorters such as IBM's 389X/XP document processor family operating on-line to an AS/400 processor, either standalone or linked to IBM mainframes.

- Flexi-Check II and Flexi-Remittance II are image-oriented solutions designed to overcome the limitations of physical document processing by substituting digital images in the first steps of the handling process.

- Automated Communications Manager (ACM) allows institutions to automatically deliver and receive data files through IBM AS/400 communications, thus allowing an institution the opportunity of having a "lights out" operator. ACM allows users to schedule jobs to automatically send or receive data files.

- DES-Mate External Encryption Device provides financial institutions with protection of both PINs and network encryption keys from unauthorized disclosure. DES-Mate also provides EFT security by performing cryptographic processing and key management independently from the host computer.

- Enhanced Problem Annunciator (EPA) is an intelligent autodialer programmed to report error conditions associated with an Arkansas Systems' product, or any other application software, to designated personnel at primary and alternate locations, in a specified sequence within time-defined parameters.

- Integrated Credit Card System enables financial institutions to issue VISA, MasterCard or private label credit cards. The system runs on an IBM AS/400 and provides processing support for proprietary credit cards, multiple card organizations, multiple participants, multiple languages and multiple currencies.

- Integrated Debit Card System allows institutions to issue proprietary ATM and POS debit cards. The system provides card information including demographics, separate ATM and POS limits and other key status elements.

- EFT Network Solutions are a set of products to support local, regional and national EFT networks. Each product has specific features to support different EFT networks.

- Flexi-Lockbox System receives data read by PS/2 workstations. Both MICR encoded checks and remittance documents are captured and stored in an all items file. The captured items are recapped, summarized on reports and reformatted to standard ACH format for dissemination to lockbox customers via diskette, cartridge

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tape, facsimile transmission or electronic transmission.

- Paths-Protocol Convertors—Arkansas Systems offers more than 25 PC-based protocol converters, or Paths, enabling AS/400 midrange systems to be used in multiple environments.

- POS Management System supports data communications with networked POS terminals to route and authorize credit and debit transactions.

- Teller Terminal Management System provides on-line communication between a host system and teller terminals to access current account data for transaction authorizations and to update account data as transactions occur.

- Integrated Transaction Management is an expandable solution for the IBM A/400 that manages EFT network solutions, items processing and clearing solutions, retail delivery and card-based payment solutions.

- Client-ACCESS Solutions enable financial institutions' customers to access multiple business transactions through a personal computer. Functions include balance access, current financial position, check clearing information, initiating transactions and sending messages to the institution.

- Integrated Balance System is a basic accounting system for clients who do not have another accounting system for handling EFT transactions.

- Integrated Smart Card System is an expandable payment system solution designed to support the user, the acquirer, the merchant, the equipment owner/operator and other card programs.

- Integrated Merchant System provides the merchant portion of processing POS debit and credit transactions.

- Clearinghouse System supports all types of transaction processing, balancing, reporting, settlements between accounts and multi-institutions, as well as EFT networks.

Support Services

Arkansas Systems' Continuing Support and Warranty Extension (CS &WE) program provides unlimited telephone assistance to enrolled clients. Assistance is offered over the phone through customer service representatives or through on-line diagnostics (dial-up error diagnostics). Support is available 24 hours a day, seven days a week.

CS &WE clients receive an extended warranty on the Arkansas Systems' software and regular product upgrade release. This agreement is valid as long as the CS & WE fee is paid.

Arkansas Systems also provides custom software development and consulting services primarily in the areas of telecommunications and distributed processing.

Clients

Recently announced U. S. clients include Ohio Bank, Farmers and Merchants Bank (NC), New England IBM Employee's Federal Credit Union and Central Corporate Credit Union (MI).

International clients include Far East Bank and Trust (Philippines), MEZOBANK (Hungary), the Agricultural Bank of

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Lithuania, The Romanian Commercial Bank, Republic Bank Limited (Trinidad) and Central Bank of Russia.

Marketing and Sales

Arkansas Systems markets its products through direct sales, joint marketing agreements and an expanding distributor network.

Arkansas has an international network of distributors.

Alliances

Arkansas Systems has business partnership agreements with IBM, InterBold and NCR (AT&T GIS). The company also has strategic agreements with several software vendors.

Arkansas Systems is a National Solutions Provider and International Business Partner for IBM.

INPUT Assessment

Arkansas Systems considers itself an industry leader in the payment systems arena.

- The company is committed to providing products that position institutions for growth and will service the future needs of its customers.
- New technologies and methodologies in the payment industry are continuously added to the products.
- The company's latest growth can be linked into an increasing international presence.

A key challenge for Arkansas Systems is addressing the client/server arena as it relates to the financial services industry.

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INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

August 1996

Arthur D. Little, Inc.

President & CEO: Charles R. LaMantia
Acorn Park,
Cambridge, MA 02140-2390
Phone: (617) 498-5000
Fax: (617) 492-2337
Internet: http://www.adlittle.com

Status:	Private
Employees:	3,030 (12/95)
Consultants:	1,795 (12/95)
Revenue:	$514,000,000
Fiscal Year End:	12/31/95

Key Points

- Founded in 1886, Arthur D. Little, the world's first consulting firm, provides management and technology consulting.
- In 1995, Arthur D. Little acquired Innovation Associates (IA), a consulting company that assists companies to become learning organizations.
- During 1995, Arthur D. Little continued its international expansion, opening twelve offices, including two in the U.S., and ten internationally.
- During 1995, the firm acquired Innovation Associates, Inc., a leading training and consulting firm with expertise in the organizational learning field.
- In February 1995, Arthur D. Little acquired the Joyce Institute, a leading ergonomics consulting firm.
- In a move to grow its presence in the Indian sub-continent, Arthur D. Little entered into an agreement with Industrial Credit and Investment Corporation of India (ICICI), based in Bombay, India.

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- In January 1995, the firm entered into an alliance with Seker Management, based in Israel, to jointly market and deliver services to clients in Israel.

Company Description

Arthur D. Little is an employee-owned international management and technology consulting firm providing consulting in three areas—management consulting; environmental, health and safety consulting; and technology and product development.

The firm was founded by Dr. Arthur Dehon Little, a Massachusetts Institute of Technology professor. Arthur D. Little operated as a public firm until June 1988, when shareholders voted to implement the Employee Stock Ownership Plan (ESOP) and the firm became a privately held corporation.

Organization and Structure

Headquartered in Cambridge (MA), Arthur D. Little has 52 offices in 30 countries.

The firm has U.S. offices in Arlington (VA); Cambridge (MA); Chicago (IL); Charleston (SC); Washington D.C.; Santa Barbara, San Francisco, Palo Alto, and Los Angeles (CA); Houston (TX); Philadelphia (PA); Seattle (WA); and New York (NY).

The firm's international offices are located in Abu Dhabi, Berlin, Bogota, Bombay, Brussels, Buenos Aires, Cambridge (U.K.), Caracas, Copenhagen, Dusseldorf, Gothenburg, Harrogate, Hong Kong, Jeddah, Kuala Lumpur, Lisbon, London, Madrid, Mexico City, Milan, Monterey, Moscow, Munich, Paris, Prague, Riyadh, Rotterdam, Sao Paulo, Seoul, Singapore, Stockholm, Sydney, Tokyo, Toronto, Vienna, Wiesbaden, and Zurich.

Arthur D. Little's key management is summarized in Exhibit A on the following page.

Arthur D. Little has six subsidiaries as follows:

- Arthur D. Little Program Systems Management Company (PSMC), based in Cambridge (MA), manages and staffs major projects for industrial firms and government.
- Arthur D. Little Management Education Institute, Inc. (MEI), based in Cambridge (MA), is the professional education component of Arthur D. Little, Inc.
- Arthur D. Little Enterprises, Inc., based in Cambridge (MA), manages the commercialization of proprietary technology and develops equity opportunities for the parent company.
- Cambridge Consultants Ltd., Cambridge (England), provides technology consulting services, including research, development and deployment.
- Innovation Associates, Inc., acquired by Arthur D. Little in 1995, focuses on areas of leadership development, systems thinking, implementing organizational learning systems, developing high-performance teams, and leading change implementation.
- The Joyce Institute, acquired in February 1995, is a ergonomics consulting firm.

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Exhibit A
Arthur D. Little, Inc.
Key Executives

Name	Title
Charles LaMantia	President & CEO
J. Paul Auton	Senior V.P. Chairman and CEO, Cambridge Consultants Ltd.
Roberto E. Batres	Senior V.P. and Directorate Managing Director Latin America Management Consulting
Alan J. Friedman	Senior V.P. and Director, Human Resources
Bruce Grant	Senior V.P. and Directorate Managing Director North America Management Consulting
J. Ladd Greeno	Senior V.P. and Directorate Managing Director Environmental, Health, and Safety Consulting
Michael J. McGaughey	Senior V.P. and Directorate Managing Director Asia Pacific Management Consulting
Ashok S. Kalelkar	Senior Vice President
Maurice Olivier	Senior V.P. and Directorate Managing Director Europe Management Consulting
Albert Sherman	Senior V.P. and Directorate Managing Director Technology and Product Development
W. Tom Sommerlatte	Senior V.P., Management Consulting
Allan Steinmetz	Senior V.P. and Corporate Director, Marketing and Communications
Jeffrey W. Traenkle	Senior V.P. and Chief Financial Officer
Alfred E. Wechsler	Senior V.P. and Chief Professional Officer

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Company Strategy

In 1994, Arthur D. Little, with half of its revenues coming from outside the U.S., successfully transitioned into an international firm. With respect to its expansion strategy, the firm is rapidly pursuing both a global, as well as regional, expansion program.

The firm is venturing into emerging markets such as India, Latin America, and Poland through alliances and new offices.

Financials

Arthur D. Little's 1995 revenue was $514 million, a 19% increase over 1994.

A three-year revenue summary follows:

Arthur D. Little, Inc.
Three-Year Revenue Summary
($ Millions)

	Fiscal Year		
Item	1995	1994	1993
Revenue	$514	$433	$385
• Percent change from previous year	19%	13%	5%

Revenue Analysis by Product/Service

In 1995, INPUT estimates that approximately 12% of Arthur D. Little's worldwide revenue was derived from professional consulting services in the information services field.

Arthur D. Little derived approximately 72% of its revenue from management consulting; 14% from technology and product development; 12% from environmental, health, and safety consulting, and 2% from other areas.

Market Financials

Arthur D. Little's clients include more than 75% of the Fortune 100 companies (or their global equivalents).

The firm's global knowledge of best practices is built on guiding change in major industries, including—automotive; chemicals; consumer goods; energy; engineering and manufacturing; financial; health care; metals and resources; pharmaceuticals and medical products; postal organizations; public administrations; telecommunications, information and electronics; transportation; travel, tourism and hospitality; and utilities.

Arthur D. Little's typical business volume includes performing services for clients in more than 60 countries worldwide. More than 85% of the firm's business comes from repeat clients. Annually, the firm works on approximately 2,500 assignments.

Geographic Markets

INPUT estimates that approximately 40% of Arthur D. Little's total 1995 revenue was derived from the U.S. and the remaining 60% was from Europe and other international sources.

Employees

As of December 1995, Arthur D. Little had 3,039 employees. Of these, 1,795 were consultants.

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Acquisitions

During 1995, Arthur D. Little acquired Innovation Associates, a leading training and consulting firm specializing in organizational learning.

- The company was co-founded by Charles Kiefer, a pioneer in the development of organizational learning, and Dr. Peter M. Senge, author and Director of the Organizational Learning Center at the Massachusetts Institute of Technology's Sloan School of Management.

- Innovation Associates' clients have included AT&T, Federal Express, General Foods, IBM, Motorola, Xerox, Intel, and Monsanto, as well as other Fortune 1000, government, and health care industry organizations.

In February 1995, Arthur D. Little acquired The Joyce Institute, a leading ergonomics consulting firm headquartered in Seattle (WA) and headed by founder Marilyn Joyce.

- The Joyce Institute rovides a range of ergonomics consulting services in office, industrial, and laboratory environments, as well as providing expertise in product design.

- The company helps companies identify causes of injuries and shows them how to apply ergonomic criteria to modify existing work areas.

Key Products and Services

Arthur D. Little offers services through three main lines of business—management consulting; environmental, health, and safety consulting; and technology and product development.

Management Consulting

Management consulting services are offered in eight core areas as follows:

- Strategy
- Customer management
- Information management
- Organization management
- Supply chain management
- Technology and innovation management
- Corporate finance management
- Manufacturing management

Environmental, Health and Safety Consulting

This group integrates technological expertise with management vision to provide services that include:

- Advanced chemical fingerprinting
- Environmental, health and safety auditing
- Environmental impact assessment
- Environmental strategy
- Ergonomics
- Industrial hygiene
- Management systems
- Natural resource damage assessment
- Occupational safety
- Pollution prevention
- Process safety
- Qualified risk assessment
- Radiation safety
- Remediation
- Risk management
- Safety management
- Site assessment
- Technology assessment
- Training
- Transportation safety

Technology and Product Development

This group is technology-focused and business-driven and offers services that include:

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- Product development
- Technology assessment
- Technology development
- R&D management

Clients

A sampling of Arthur D. Little's significant clients is shown in Exhibit B on the following page.

Marketing and Sales

Arthur D. Little has made strategic investments in its marketing process such as:

- Hiring a senior advertising and marketing strategist, Allan Steinmetz, to the post of Senior Vice President and Corporate Director of Marketing and Communications
- Recruiting other senior staff
- Retaining advertising and global public relations agencies
- Marketing through an integrated communications approach, including public relations, database marketing, advertising, and relationship building forums around the world

A key and consistent marketing approach for over 100 years is the codification and publication of management books.

Recent examples of Arthur D. Little's business management books include:

- *Product Juggernauts: How Companies Mobilize to Generate a Stream of Market Winners*
- *The Unwritten Rules of the Game*
- *Third Generation R&D*

Alliances

In seeking to meet and anticipate the needs of its worldwide clients, Arthur D. Little has formed a number of alliances as follows:

- In May 1995, Arthur D. Little formed an alliance with Seker Management of Israel to pursue joint business engagements in Israel, in areas that complement the firm's strategic competencies.
- Arthur D. Little has an agreement with ICICI, based in Bombay, India. The two firms will work together on some assignments, as well as be involved in joint marketing and business development. Arthur D. Little will focus on management restructuring, while ICICI will be involved in financial restructuring of Indian businesses.

Competition

Arthur D. Little's competitors include traditional management consulting firms, environmental consulting firms, and technology and product development firms.

The firm faces significant competition from major consulting firms, including McKinsey & Company, A.T. Kearney (EDS), Andersen Consulting, Coopers & Lybrand, Booz Allen & Hamilton, Gemini Consulting, CSC Consulting, Mercer Management Consulting, and Monitor.

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Exhibit B
Arthur D. Little, Inc.
Clients

AGIP
Allianz Worldwide
Allied Signal, Inc.
American Express
Amoco
Apple Computer, Inc.
AT&T Bell Laboratories
BankAmerica Corporation
Baxter International
Boeing
British Petroleum
CEMEX
Chevron
Chrysler Corporation
Citicorp
The Coca-Cola Company
Conagra
Coopers & Lybrand
Corning Incorporated
Daimler-Benz Group
Digital Equipment Corporation
The Dow Chemical Company
Du Pont
Ethicon Endo-Surgery
Exxon
Federal Express
Fiat Group
Frito-Lay, Inc.
Ford Motor Company
Gas Research Institute
General Electric Company
General Motors
The Gillette Company
Glaxo Holdings
Hewlett-Packard
Hitachi
Hong Kong Mass Transit Railway Corporation
IBM
Intuit, Inc.
Johnson & Johnson
LG Group
L.L. Bean, Inc.
Lockheed Martin
Marion Merrell Dow, Inc.
Matsushita Electric
Merck & Company, Inc.
Metropolitan Life Insurance
Mitsubishi
Mitsui & Company
Mobil
Monsanto
Motorola, Inc.
NASA
Nestle
Nippon Telephone & Telecommunications
Nissan Motor
Neutronics
Northern Telecom]
PepsiCo
Pfizer Pharmaceuticals
Philip Morris
Procter & Gamble Company
Prudential Insurance Company of America
Public Service of New Mexico
Roche Pharmaceuticals
Samsung Group
Sandia National Laboratories
Scott Aviation
Sears Roebuck
Royal Dutch/Shell Oil Group
Siemens Group
State Farm Group
Sumitomo
Texaco
Thomas cook Group
3M
Tokyo Electric Power
Toshiba
Toyota
Unilever
Union Carbide Corporation
United Kingdom Department of Transport
United Parcel Service
United States Department of Energy
Volkswagen Group
Volvo
Westinghouse
Whirlpool Corporation
Xerox Corporation
Yacimientos Petroliferos Fiscales (YPF)

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INPUT Assessment

Arthur D. Little feels its strengths include:

- An approach to building strong client involvement and a focus on team/client learning
- The expertise of its consultants in a diverse set of industries and technologies
- A strong client base
- A global focus
- The ability to organize global teams in many industries
- A strong portfolio of diverse products
- The ability to innovate quickly

Challenges for the coming year include:

- Continuing to attract and retain industry experts
- Maintaining an aggressive expansion program

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ASA INTERNATIONAL LTD.
1700 West Park Drive
Westborough, MA 01581
(508) 898-2727

After June 15, 1992:
10 Speen Street
Framingham, MA 01701

Alfred C. Angelone, Chairman and CEO
Christopher Crane, President
Robert L. Voelk, Executive Vice President
Public Corporation, NASDAQ
Total Employees: 204 (12/91)
Total Revenue, Fiscal Year End
12/31/91: $23,462,892

The Company

ASA International Ltd. (ASA) currently develops, markets, and supports integrated systems in four vertical markets: international trade, manufacturing, independent tire dealers, and law firms.

During the past year, ASA made two acquisitions in the legal market.

- In June 1991, ASA acquired Quorum Systems of Plymouth Meeting (PA) from Control Data Corporation for approximately $1.1 million. Quorum provides processing, software, and turnkey systems to over 200 law firms and corporate legal departments. Quorum had 1990 revenue of about $8.5 million.

- In January 1992, ASA acquired Legal Data Systems Inc. of Boston (MA) for approximately $345,000. Legal Data provides law automation software to approximately 70 clients.

ASA is currently organized into the following groups:

- The International Trade and Transportation Systems Group, headquartered in Salem (NH), provides IBM AS/400 and DEC VAX-based software products and turnkey systems to customshouse brokers, freight forwarders, and other international trade participants in the U.S. and Canada. The group was formed by acquisition in 1983 and expanded in 1990 with the acquisition of its largest competitor, Trade Data Services, Inc.

- The CIM Systems Group, headquartered in Framingham (MA), was formed by merging ASA's Manufacturing and Bar Code Data Collection units. This group provides DEC VAX-based MRPII systems and real-time bar code data collection systems for the manufacturing shop floor.

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- The Tire Systems Group, headquartered in Framingham (MA), provides DEC VAX and UNIX-based turnkey systems to tire retailers and distributors in the U.S. and Canada.

- The Legal Systems Group, headquartered in Plymouth Meeting (PA) and formed with the acquisitions of Quorum and Legal Data, provides processing services, and DEC VAX and UNIX-based software products and turnkey systems to law firms and corporate legal departments.

ASA's 1991 revenue reached $23.5 million, a 25% increase over 1990 revenue of $18.7 million. Net income rose 18%, from $285,000 in 1990 to $336,000 in 1991. A five-year financial summary follows:

ASA INTERNATIONAL LTD.
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

	FISCAL YEAR				
ITEM	1991	1990	1989	1988	1987
Revenue	$23,463	$18,731	$23,769	$19,281	$16,931
· Percent increase (decrease) from previous year	25%	(21%)	23%	14%	14%
Income (loss) before taxes	$407	$318 (a)	$575	$(795)	$264
· Percent increase (decrease) from previous year	28%	(45%)	172%	(401%)	186%
· Gross margin	2%	2%	2%	N/A	2%
Net income (loss)	$336 (b)	$285 (b)	$520 (b)	$(518)	$223
· Percent increase (decrease) from previous year	18%	(45%)	200%	(332%)	141%
· Net margin	1%	2%	2%	N/A	1%
Earnings (loss) per share (c)	$0.09	$0.07	$0.14	$(0.14)	$0.05
· Percent increase (decrease) from previous year	29%	(50%)	200%	(380%)	125%

(a) Includes a $1.3 million net gain on the sale of subsidiary and product lines.

(b) Includes an extraordinary credit of $211,000 in 1991, $205,000 in 1990, and $203,000 in 1989 resulting from the benefit of net operating loss carryforward.

(c) Restated to reflect a one-for-50 reverse stock split effective May 4, 1990.

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A three-year source of revenue summary by operating group follows:

ASA INTERNATIONAL, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	1991		1990		1989	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
International Trade	$7.6	32%	$8.9	47%	$8.3	35%
CIM	5.9	25%	5.2	28%	10.3	43%
Tire/Distribution (a)	5.2	22%	4.6	25%	5.2	22%
Legal	4.8	21%	--	--	--	--
TOTAL	**$23.5**	**100%**	**$18.7**	**100%**	**$23.8**	**100%**

(a) Includes revenue from hardgoods distribution systems operations of approximately $565,000 in 1990 and $2.3 million in 1989. These operations were sold in 1990.

ASA management attributes 1991 results to the following:

- International Trade Group revenue declined 15%, reflecting the continuing economic uncertainty and business consolidation in this market. The group had pretax earnings of $517,000 in 1991, compared to losses of $42,000 for 1990.

- CIM Group revenues increased 12% due to an improvement in sales related to the bar code data collection product line. The group had pretax earnings of $360,000 in 1991, compared to earnings of $107,000 in 1990.

- The Tire/Distribution Group had a 201% increase in revenues due partially to the acquisition of Computers Northwest, Inc., in June 1990. The group had pretax earnings of $494,000 in 1991, compared to $164,000 in 1990.

- The Legal Systems Group, newly formed in 1991, contributed nearly 21% to ASA's total revenue. The group's pretax earnings were $426,000.

As of December 31, 1991, ASA had 204 full-time employees, segmented as follows:

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Marketing and sales	38
Customer support and training	58
Custom/product development and engineering	51
General and administrative	27
Legal service bureau	21
Executive officers	9
	204

ASA's primary competitors, by market area, include the following:

- International trade: Freight Data Systems, Ltd.
- Manufacturing systems: IBM, ASK Computer Systems, and Cincom
- Tire systems: Madden Co. and Progressive Computer Systems
- Bar code data collection: Welch-Allyn, Epic Data Systems, and Burr Brown
- Legal systems: This group has many competitors, including Automation Partners, Capsoft Development, CMS/DATA, CompuTrac, Elite, and Juris

Key Products and Services

Virtually all of ASA's 1991 revenue was derived from turnkey systems and associated support services. A small percentage was derived from processing services provided to the legal market.

ASA currently has more than 1,800 clients.

The International Trade and Transportation Systems Group provides software products and turnkey systems that prepare documents required for compliance with U.S. Customs' regulations, track the movement of goods and paperwork, and perform invoicing and general-accounting functions. The products are targeted to customshouse brokers and freight forwarders.

- The Custom House Documentation System prepares the forms required by a customshouse broker to complete an import shipment, calculates import duties and service fees, prepares invoices, processes liquidations, and tracks missing documents.
  - Each system includes a data base of tariffs provided by U.S. Customs. ASA updates this data base as changes are made by the U.S. government.

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- The system is available for DEC VAX and IBM AS/400 computers, based on the size and number of entries processed by a particular customshouse broker. Pricing ranges from $30,000 to $500,000.

- A shipment-tracing module facilitates tracking of import shipments. Importers may access their own information using the import connection to their broker's data base.

· ASA's Automated Broker Interface (ABI) system extracts entry summary data from ASA's Custom House Documentation System. ABI formats and electronically transmits this data to the U.S. Customs' computer, which facilitates shipment release and document filing. Customs Automated Data Exchange System (CADEX) is the Canadian equivalent of ABI.

· ASA's export systems for air and ocean freight forwarders are based on DEC and IBM hardware.

- The Air Freight System processes information for each shipment of goods, including performing an automatic credit check of the shipper, validating shipment information, preparing bills of lading, routing shipments for multibranch companies, assigning air waybills, calculating freight charges, consolidating multiple shipments, calculating commissions, and tracking shipments.

- The Ocean Export Documentation System performs similar functions, including tracking vessel departures and arrivals, preparation of commercial invoices and other required export documents, tracking of ocean freight commissions, and providing sales management information.

· FaxMax™ sends faxes from DEC VAX computers to any fax machine.

· FaxTrax automatically faxes shipment status information to selected customers.

· ASA markets accounting software for use with its import and export systems or as a separate system for companies involved in international trade.

- Applications supported include billing, tracking of accounts receivable and accounts payable, verification and matching of related transactions, general ledger, financial reporting, sales analysis, and tracking of brokerage commissions from steamship lines and airlines.

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- ASA EDI Engine is an EDI translation product.

- Customers are located in the U.S., Canada, Puerto Rico, Bermuda, and the Virgin Islands.

The CIM Systems Group provides DEC VAX and UNIX-based software products and turnkey systems for manufacturing control and accounting applications and real-time bar code data collection systems for the manufacturing shop floor.

- The Opus™ Manufacturing System is a turnkey manufacturing control and accounting system for DEC MicroVAX and VAX computers and networks. This is a closed-loop system primarily for make-to-order manufacturers ranging in size from about $3 to $30 million in sales volume.

  - Modules include Estimating and Quoting, Job Shop Control, Bill of Materials, Inventory Control, Multi-Location Inventory, Production Control, MRP, Purchasing, General Ledger, Sales Order Entry/Invoicing, Sales Order Analysis, Sales Order Configurator, Payroll, Accounts Receivable, Accounts Payable, Prospect Tracking, and an ad-hoc report writer.

- The Opus ™II System is an on-line, closed-loop MRPII system for DEC MicroVAX and VAX computers and networks. The system is targeted primarily to make-to-stock manufacturers with over $25 million in sales volume.

  - Modules include Bill of Materials, Inventory Control, Master Production Scheduling, Material Requirements Planning, Purchasing, Production Control, and Sales Order Management.

- ASA also offers a set of financial applications that can be integrated with the Opus and Opus II systems. Applications include general ledger, financial reporting, accounts receivable, accounts payable, payroll, bank reconciliation, project tracking, and fixed assets.

ASA markets and supports the ShopKeeper™ family of bar code data collection applications for shop floor management. The software runs under the DEC VAX/VMS and Stratus VOS operating systems.

- ShopKeeper collects data on the manufacturing shop floor using various manufacturers' bar code data collection devices.

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- Data collection applications include time and attendance, labor reporting, work-in-process, inventory, and lot traceability.

- Wand 2S is a utility for data collection network management.

- ASA also provides clients with the system integration and support services needed to implement a bar code data collection system on the shop floor. Professional services provided by this group include designing and installing custom systems software applications on DEC hardware.

The Tire Systems Group provides turnkey systems to independent tire dealers, wholesalers, and retreaders. The group currently has over 800 customers in the U.S. and Canada.

- Tire Max 2000 is ASA's system for DEC VAX and UNIX systems and is targeted to independent tire dealers.

  - System functions include order processing, inventory control, bill of materials, purchasing, accounts receivable, accounts payable, sales analysis, and general ledger.

  - During 1990, bar code data collection and EDI capabilities were added.

  - System prices range from $15,000 to $200,000.

The Legal Systems Group provides turnkey systems, software products, and processing services to over 270 law firms/corporate legal departments.

- The group offers a batch processing service for timekeeping and bill information management. There are currently over 70 processing clients.

- Legal Advocate™ is an open systems applications software product designed to run on non-proprietary operating systems and multiple hardware platforms, including UNIX- and Intel-based PCs and IBM's RS/6000.

  - The system supports the requirements of the average law firm, including generating reports, bills, and other documents; timekeeping; client accounting; billing; accounts receivable; transfers and adjustments; and client and matter inquiry.

  - Legal Advocate is priced from $9,000 to $56,000.

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- Management Program 2000 (MP2000)™ is a DEC VAX-based financial management and reporting system with relational data base management capabilities.
  - MP2000 is designed to help medium-sized and large law firms manage day-to-day billing and overall financial performance.
  - Applications supported include client accounting, general ledger, accounts payable, conflict of interest, docket control, and legal records management.
  - MP2000 ranges in price from $70,000 to $50,000.
  - Desktop Integration Services helps law firms to integrate a variety of PC-based software packages with existing hardware and operating systems.

Industry Markets

Approximately 32% of ASA's 1991 revenue was derived from customshouse brokers and freight forwarders, 25% from manufacturers, 22% from tire distributors, and 21% from the legal market.

Geographic Markets

Over 90% of ASA's 1991 revenue was derived from the U.S. and 10% from Canada.

Effective June 15, 1992, ASA's headquarters will be in Framingham (MA). Other U.S. offices are in Salem (NH), New York (NY), Tucker (GA), Redmond (WA), and Plymouth Meeting (PA).

Computer Hardware and Software

ASA has DEC VAX 3XXX and MicroVAX computers installed in Westborough (MA) and Salem (NH) in support of its research and development and customer support activities.

Various DEC systems are installed in Plymouth Meeting (PA) in support of processing provided to the legal market.

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COMPANY PROFILE

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ASA LEGAL SYSTEMS COMPANY INC.
(formerly Quorum Systems)
960-C Harvest Drive
Union Meeting Corporate Center
Blue Bell, PA 19422
Phone: (215) 542-2100
Fax: (215) 542-2149

President:	William E. Baker
Status:	Subsidiary
Parent:	ASA International
Total Employees:	200
Total Revenue:	$31,448,000
Fiscal Year End:	12/31/92

Key Points

- ASA Legal Systems provides processing services, software products, and turnkey systems to law firms and corporate legal departments for financial management, accounting, and word processing.
- ASA Legal Systems operated as a division of CDC (as "Quorum Systems") until June 1991 when it was acquired by ASA International and renamed ASA Legal Systems Company Inc.
- The company is an Authorized Distributor for DEC, an industry remarketer for IBM, and an HP reseller.
- ASA Legal Systems introduced an open systems software application in 1991. This product has positioned the company's product line to run on non-proprietary operating systems and multiple hardware platforms, including the full range of UNIX- and Intel-based personal computers,

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Company Description

ASA Legal Systems provides processing services, software products, and turnkey systems to over 200 law firms and corporate legal departments for financial management, accounting, and word processing. The company is an Authorized Distributor for DEC, an industry remarketer for IBM, and an HP reseller.

ASA Legal Systems was founded in 1969 as Compute-R-Systems and was purchased by Control Data Corporation (CDC) in late 1984. ASA Legal Systems operated as a division of CDC (as "Quorum Systems") until June 1991 when it was acquired by ASA International and renamed ASA Legal Systems Company Inc.

Operations/ Structure

ASA Legal Systems is a subsidiary of ASA International located in Framington, Massachusetts.

Strategy

ASA's Legal Advocate™, introduced in February 1991, is the company's open systems software designed to run on non-proprietary operating systems and multiple hardware platforms, including the full range of UNIX- and Intel-based personal computers, including IBM, Hewlett-Packard and DEC computers.

The increase in ASA Legal System's business has been primarily realized in this product line while batch processing services client base has steadily declined.

Key Products and Services

ASA Legal Systems offers the following products and services for accounting and financial management:

Outsourcing Services

- ASA's Legal Link is a batch processing service for timekeeping and billing information management. There are currently approximately 50 clients.

Software Products

- Legal Advocate™, introduced in February 1991, is the company's open systems software designed to run on non-proprietary operating systems and multiple hardware platforms, including the full range of UNIX- and Intel-based personal computers, including IBM, Hewlett-Packard and DEC computers.

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- Legal Advocate addresses the requirements of the average law firm to generate reports, bills, and other documents formatted and tailored to the firm's specific needs.

- In addition to report generation, applications supported include timekeeping, client accounting, billing, accounts receivable, transfers and adjustments, and client and matter inquiry.

- Legal Advocate is priced from $9,000 to $56,000 and there are currently 20 installations.

· Legal Partner is an advanced accounting and financial management system for mid- to large-sized law firms. This system uses the INGRES relational data base management system.

- Legal Partner is designed to help medium and large law firms manage day-to-day billing and overall financial performance.

- Applications supported include client accounting, general ledger, accounts payable, conflict of interest, docket control, and legal records management.

- Legal Partner ranges in price from $70,000 to $500,000 and there are currently 28 installations.

Legal Partner also includes the following optional modules: Executive Information System, Imaging, Marketing, Trust Accounting, and Split Party Billing.

Professional Services

Professional services provided include software modifications, disaster recovery, education, system capacity planning/tuning, maintenance, and consulting.

Competition

ASA Legal Systems' competitors include The Minicomputer Company, CMS/DATA, CompuTrac, Elite, and Juris.

Industry Markets

ASA Legal Systems' clients include large and mid-sized law firms and corporate legal departments.

Geographic Markets

Approximately 98% of ASA Legal Systems' 1992 revenue was derived from the U.S. and 2% from Canada.

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COMPANY
PROFILE

THE ASK GROUP, INC.
2440 W. El Camino Real
P.O. Box 7640
Mountain View, CA 94039-7640
Phone: (415) 969-4442
Fax: (415) 962-1974

Chairman:	Sandra L. Kurtzig
President & CEO:	Pier Carlo Falotti
Status:	Public Corporation
Stock Exchange:	NASDAQ
Total Employees:	2,282 (9/92)
Total Revenue:	$432,424,000
Fiscal Year End:	6/30/92

Key Points

- The ASK Group has pursued a strategy of diversification through the development and acquisition of core software technologies--intelligent relational data bases, fourth-generation language (4GL) development environments, application development tools, and open application products--in addition to its traditional manufacturing and financial management applications products for Hewlett-Packard (HP), DEC, and IBM midrange systems.

- The company's development plans include moving its applications to an open systems environment with its software operating on all the major hardware platforms. The first such product, MANMAN/X, was released in September 1992.

- The ASK Group will continue to deemphasize its hardware reselling activities and focus on its software and services business. Prior to the 1990 acquisition of Ingres, about 80% of revenue was from the U.S. and hardware resales accounted for more than 50% of total business. Now more than 45% of revenue comes from markets outside North America and more than 80% of revenue is from software licenses and services.

- The company has expanded its client base to include not only manufacturing customers, but also customers in international banking, government, transportation, telecommunications, advanced research, and retail.

- During the first quarter of fiscal 1993, Pier Carlo Falotti was appointed president and chief executive officer of The ASK Group and Sandra Kurtzig, the company's founder, transferred to Mr. Falotti the day-to-day running of the business.

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Company Description

The ASK Group develops, markets, and supports manufacturing and financial management applications for HP, DEC, IBM midrange, and UNIX-based computers which are available as software products or turnkey systems, and via processing services. As a result of the acquisition of Ingres Corporation, The ASK Group also provides relational data base management systems (RDBMSs) and application development tools for open systems.

During the first quarter of fiscal 1992, the company restructured its operations into The ASK Group, which includes a corporate function and three decentralized business units, each with worldwide responsibility for product development, marketing, sales and support, accounting, and administration for their respective product lines. The three business units include the following:

- ASK Computer Systems, based in Mountain View (CA) with 675 employees, is responsible for manufacturing applications, including the MANMAN® and MAXCIM product lines for HP and DEC systems, the MANMAN/X system for UNIX systems, and the upcoming ADVANCE open systems product family. This unit accounted for 37% ($158 million) of fiscal 1992 revenue.

- The Data 3 business unit, based in Santa Rosa (CA) with 120 employees, develops and markets the SIM/400 integrated manufacturing application for the IBM AS/400 market. This unit accounted for 4% ($19.5 million) of fiscal 1992 revenue.

- The Ingres business unit, headquartered in Alameda (CA) with 1,550 employees, develops and markets the INGRES relational data base management system, integrated tools for workstation- and terminal-based programmers, and connectivity products for the open system market. This unit accounted for 59% ($254.9 million) of fiscal 1992 revenue.

  - The acquisition of Ingres was completed in October 1990 for approximately $123 million in cash.

  - Ingres had approximately 1,200 employees at the time of the acquisition and revenue of $157 million for the fiscal year ending June 1990.

  - In order to finance the acquisition, The ASK Group sold 5.6 million shares (30%) of its common stock to Electronic Data Systems (EDS) and Hewlett-Packard Company (HP) for an aggregate of $60 million in cash. EDS now holds 20% of The ASK Group and HP holds 10%.

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Financials

Total fiscal 1992 revenue reached $432.4 million, a 27% increase over fiscal 1991 revenue of $339.8 million.

- Fiscal 1991 financials include the results of Ingres from the date of its acquisition in October 1990. If the pre-acquisition period revenues for Ingres were included, fiscal 1992 revenue would have increased 13% over 1991.

- Net losses of $47.7 million for fiscal 1992 include amortization of Ingres acquisition-related expenses of $10.2 million and a one-time, non-cash write-down of intangible assets of $63.3 million. Excluding these expenses, income from operations for fiscal 1992 would have been $32.9 million, a 239% increase over $9.7 million for fiscal 1991.

- In the five-year summary that follows, financials prior to fiscal 1992 have been restated to reflect a change in the method of accounting for software maintenance revenues.

THE ASK GROUP, INC.
FIVE-YEAR FINANCIAL SUMMARY (a)
($ millions, except per share data)

	FISCAL YEAR				
ITEM	6/92	6/91	6/90	6/89	6/88
Revenue	$432.4	$339.8	$204.3	$184.2	$138.4
• Percent increase from previous year	27%	66%	11%	33%	N/A
Income (loss) before taxes	$(47.7) (b)	$4.6	$6.4	$18.9	$11.4
• Percent increase (decrease) from previous year	*	(28%)	(66%)	67%	N/A
Net income (loss)	$(47.7)	$0.1	$3.0	$12.2	$8.4
• Percent increase (decrease) from previous year	*	(97%)	(75%)	45%	N/A
Earnings (loss) per share	$(2.37)	$0.01	$0.23	$0.90	$0.63
• Percent increase (decrease) from previous year	*	(96%)	(74%)	27%	N/A

* *Percent change exceeds 1,000%.*

(a) *Financials prior to fiscal 1992 have been restated to reflect a change in the method of accounting for software maintenance revenues.*

(b) *Includes $10.2 million in acquisition-related items and $63.3 million from write-downs of intangible assets.*

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Ingres' revenue increases (a 94% increase based on the acquisition date, or a 54% increase for the full twelve months of fiscal 1991 compared to fiscal 1992) accounted for all of the increase in consolidated revenues for The ASK Group.

ASK Computer Systems' fiscal 1992 revenue declined 15%, with systems revenue decreasing 27% while service revenue grew 17%. Data 3 showed similar results, with total revenue and systems revenue declining 9% and 21%, respectively, while service revenue increased 32%.

- Systems revenue declined primarily due to the continuing de-emphasis of third-party hardware revenue and flat software license sales.

- Company management believes it will be increasingly difficult to sell hardware in conjunction with its applications software as the trend toward open systems software grows, and therefore does not expect this trend in hardware revenue to reverse. Because of this, these business units will be prospectively managed as software and services businesses.

International revenue, net of purchase accounting adjustments, increased 52% over fiscal 1991 and accounted for 49% of fiscal 1992 revenues as compared to 40% of revenue in fiscal 1991.

Product development expenditures were approximately $35.6 million (8% of revenue) in fiscal 1992, compared to $29.9 million (9% of revenue) in fiscal 1991, $16.5 million (8% of revenue) in fiscal 1990, and $13.4 million (7% of revenue) in fiscal 1989.

Revenue for the six months ending December 31, 1992 reached $197.3 million, an 8% increase over $181.9 million for the same period in 1991.

- Net losses were nearly $4.0 million, compared to net losses of $57.9 million for the same period a year ago, which include the one-time write-down of goodwill and intangible assets of $63.3 million.

- Software and services revenue was 88% of total revenue for the six months ending December 31, 1992, as compared to 81% of total revenue for the comparable period last year. This reflects the company's continuing emphasis on expanding its software and services revenue while decreasing the hardware component of its business.

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Employees

As of August 31, 1992, the company had 2,282 full-time employees, segmented as follows:

Marketing, sales, education, and field support	1,439
Product development	443
Finance and administration	400
	2,282

Competitors

In the applications area, ASK Computer Systems and Data 3 compete with D&B Software Services, HP, and IBM. In the RDBMS area, Ingres competes with Oracle Systems, Sybase, and Informix.

Key Products and Services

Approximately 59% of The ASK Group's fiscal 1992 revenue was derived from systems software products and associated support services, 24% from applications software and associated support services, and 17% from hardware.

A three-year summary of source of revenue, as provided by The ASK Group, follows:

THE ASK GROUP, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	6/92		6/91		6/90	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
Systems (a)	$272.5	63%	$264.1	78%	$155.6	76%
Service (b)	159.9	37%	75.7	22%	48.7	24%
TOTAL	**$432.4**	**100%**	**$339.8**	**100%**	**$204.3**	**100%**

(a) Includes applications software, turnkey systems, and systems software sales.

(b) Includes maintenance, processing, education, and implementation services.

A further breakdown of revenue for fiscal 1992 and 1991 follows:

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THE ASK GROUP, INC.
TWO-YEAR SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR			
	6/92		6/91	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
ASK Computer Systems				
- Software and services	$88.1	20%	$85.6	25%
- Hardware	69.6	16%	101.9	30%
	$158.0	36%	$187.5	55%
Data 3				
- Software and services	$15.2	4%	$14.8	4%
- Hardware	4.3	1%	6.1	2%
	$19.5	5%	$20.9	6%
Ingres (a)				
- Software and services	$254.9	59%	131.4	39%
TOTAL	**$432.4**	**100%**	**$339.8**	**100%**

(a) Includes the results of Ingres from the date of its acquisition in October 1990, less purchase accounting adjustments of $6.3 million in fiscal 1992 and $56.5 million in fiscal 1991.

Ingres Business Unit:

Ingres is a leading supplier of relational data base management, application development, and data access software products to users of Intel-based, DEC, HP, Sun Microsystems, and IBM computers, minicomputers, workstations, and PCs running proprietary and UNIX operating systems. In addition, Ingres products have been ported to operate with a range of computers from other computer system companies.

In November 1991, Ingres introduced version 6.4 of INGRES, its intelligent RDBMS that has a multiserver architecture designed to support client/server applications. There are currently over 84,500 installations of INGRES worldwide.

Application development tools for INGRES include the following:

- INGRES/VISION is an application code generator.
- INGRES/WindowView supports the use, modification, and creation of terminal applications on the workstation.

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- INGRES/Windows 4GL combines an object-oriented 4GL with a graphical user interface management system.

INGRES end-user decision support tools include the following:

- INGRES/Menu is an interactive menu supporting access to various INGRES RDBMS functions.

- INGRES/Query allows users to query and update data by filling in the blanks on a form.

- INGRES/Reports allows the user to lay out the format of a report visually on the screen as it would be seen on the printed page.

- INGRES/ISQL is an interactive, full screen facility for entry, execution, and display of SQL queries.

INGRES/OpenCASE is a program in which Ingres is working closely with its CASE partners to ensure that their products are fully integrated with the INGRES open Data Dictionary and that their products take advantage of Ingres' application development tools and INGRES RDBMS.

Ingres has joint development and/or joint marketing agreements with various software vendors to make available additional application development and end-user tools in conjunction with the INGRES RDBMS. Ingres also has relationships with various value-added resellers and systems integrators.

Jointly developed or third-party products offered by Ingres include the following:

- INGRES/PCLink (from Multiplex, Inc.) allows PC users to access the INGRES RDBMS on certain larger computers to extract and transfer data across a network and store the data in the user's PC files.

- GQL--Graphical Query Language (from Andyne) is an ad hoc query and reporting tool for Microsoft Windows-based PCs and Apple Macintosh computers.

INGRES access products enable users to access and use data on various computers and existing systems in their organizations. Access products include the following:

- INGRES/NET, a communications server

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- INGRES/GATEWAYS, allowing interconnections of Ingres' tools and RDBMS with other data bases and products (DEC's RMS and Rdb and IBM's DB2 and IMS)

- INGRES/STAR, a distributed data base manager

Support services offered through Ingres include the following:

- Technical Support:

  INGRESplus support is a technical support service offered to all INGRES end-user customers that provides ongoing software maintenance, product enhancements, and telephone consulting. The service is paid for in advance on an annual basis.

  INGRES Bulletin Board Support is an interactive software-error posting system for customers with minimum support requirements. No telephone support is included.

  INGRES Lifeline Support provides the end-user customer with updates and access to Ingres' on-line technical support knowledge base for customers with low support requirements.

  INGRES Account Support provides telephone support and proactive account management, including on-site customer visits to examine the end user's data base management system. This level of support is suited for customers with large or complex data base system installations.

  INGRES Customer Support provides expedited telephone support by a team of dedicated INGRES specialists. This level of support is offered primarily for customers who are in the active development or deployment stages.

- Consulting Services:

  Ingres offers a range of installation, data base design, application design, development, software planning, performance tuning, and data base management consulting services to assist in developing and deploying custom INGRES-based business solutions. These services may be combined with on-site education and technical support. Consulting Services are offered on a per-day or contract basis.

- Premium Support:

  This is a high-level support program to meet the complex support demands of Ingres' largest customers and those with mission-critical

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applications. A team of INGRES support specialists are dedicated to the customer in order to acquire an understanding of the customer's business applications and system environment. Other features of the service include personalized telephone support, on-site reviews, guaranteed response times to customer software error requests, quarterly on-site account reviews, a 24-hour/7 day-a-week telephone hotline, a toll-free 800 telephone number, client-based upgrade management consulting, and emergency on-site services. This service is priced on a contract basis and is only available in the U.S.

- Education Services:

  Formalized training is provided for INGRES customers at several regional locations throughout the U.S., Europe, and the Asia/Pacific. Customized education programs are also offered to meet specific customer needs. Pricing is based on a per-day or contract basis.

ASK Computer Systems (MANMAN and MAXCIM):

The MANMAN Information System is an on-line, interactive system that consists of integrated products for manufacturing, finance, marketing, customer service, decision support, and computer-integrated manufacturing functions. There are currently over 2,000 MANMAN clients worldwide. MANMAN products are summarized in Exhibit A.

- MANMAN is targeted to manufacturers in the batch production, JIT/repetitive, automotive (MANMAN/Automotive), job shop, and batch process manufacturing (MANMAN/Process) segments.

- MANMAN runs on HP 3000 and Precision Architecture 900 series computers (MANMAN HP) and DEC VAX series minicomputers (MANMAN VAX).

- During the first quarter of fiscal 1993, ASK released MANMAN/X, the company's new UNIX-based manufacturing business management system, that supports all aspects of manufacturing and works with multiple hardware platforms and data bases. It is particularly well suited for international markets, supporting translation and localization. It consists of 27 modules that automate the entire manufacturing process, including planning and costing, engineering control, project control, inventory, shop floor control, sales management, purchasing, finance, customer service, and maintenance.

- MANMAN is available to clients as a turnkey system, as software only, or via ASK's ASKNET processing service.

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EXHIBIT A

ASK COMPUTER SYSTEMS

MANMAN PRODUCTS

PRODUCT	DESCRIPTION
Manufacturing:	
MANMAN/MFG™	Manufacturing planning and execution
PLANMAN®/MFG	Forecasting and budgeting
MANMAN/REPETITIVE™	Planning and control of repetitive manufacturing
MANMAN/AUTOMOTIVE	Manufacturing system for auto suppliers
MANMAN/PROCESS	Process manufacturing system
MANMAN/PROJECTS™	Project management system
MANMAN/BARSCAN™	Bar code production system
MANMAN/QUALITY™	Product and process quality tracking and analysis system
MANMAN/TRACKER™	Lot tracking and reporting system
Connectivity:	
MANMAN/ENGINEER™	Interface between MANMAN and CAE/CAD systems
MANMAN/DATAPORT™	Interface between MANMAN and third-party shop floor data collection systems
Customer Service:	
MANMAN/OMAR™	Order management and accounts receivable system
MANMAN/SERVICEMAN®	Product service management tool
Finance and Administration:	
MANMAN/AP™	Accounts payable system
MANMAN/4GL™	General ledger
MANMAN/FA™	Fixed-assets
MANMAN/PAYROLL™	Payroll system
MANMAN/HR™	Human resources system
Decision Support:	
DecisionMaker®	Management reporting tool

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ASK's MAXCIM software, acquired with NCA in August 1987, consists of integrated modules for manufacturing, financial, sales and marketing, administrative, and information management applications designed to assist management in planning and controlling manufacturing operations. The software is available for DEC VAX computers. There are currently approximately 600 MAXCIM customers.

In February 1990, ASK announced its intention to introduce a new open systems product (ASK ADVANCE) with the goal of advances in both technology and functionality.

- With the introduction of MANMAN/X, ASK satisfies its immediate technology goals (a UNIX-based, 4GL application).

- The ASK ADVANCE program is continuing and is focused on integration of applications across a manufacturing enterprise. This effort is complementary to the MANMAN, MAXCIM, and MANMAN/X products.

- Under the MANMAN/X architecture and framework, the technological improvements from ADVANCE are being transferred to the MANMAN/X product family.

ASK Computer Systems offers the following support services for the MANMAN, MANMAN/X, and MAXCIM product lines:

- Warranty-Plus, for MANMAN and MAXCIM, is an extended maintenance software subscription service that provides customers with ongoing software maintenance, product enhancements, and telephone consulting regarding ASK software features and procedures. The service is billed to customers on a quarterly or annual basis, in advance.

- MANMAN/X ADVANTAGE offers its customers a variety of software installation, technical support, user training, and education services, which are performed for a separate charge either at ASK's offices or at the customer's site.

- ASK also offers site-specific technical consulting, including system installation, implementation, and integration of ASK software with other systems.

All computer hardware installation, maintenance, repair, and operating system software updates for ASK turnkey clients are provided by the hardware vendor. ASK is responsible only for the installation and maintenance of its software products.

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Data 3:

Data 3 markets and supports the SIM/400 customer-responsive Information System exclusively for IBM AS/400 computers. Data 3 is an authorized IBM Business Partner.

- SIM/400 supports manufacturing, accounting, bar code, distributed requirements planning (DRP), sales order management, multiple CPU distributed requirements planning, and EDI functions.

- SIM/Windows, released during fiscal 1992, supports cooperative processing between the AS/400 and PCs. It allows SIM/400 applications to run within the Microsoft Windows environment.

- There are currently over 750 SIM/400 customers worldwide.

Products developed and distributed in 1992 include the following:

- SIM/400 EDI is a new product for the electronic data interchange of purchase orders and sales orders between customers and vendors. This new product allows SIM/400 to meet the needs of companies whose customers and vendors require this form of business relationship.

- Open Application Architecture standardizes and simplifies the integration of third-party products (such as CAD, finite scheduling, and forecasting) to SIM/400.

- Multiple CPU Distributed Requirements Planning was developed for SIM/400 users with multiple sites and AS/400s at those sites. The advantages of SIM/400 Distributed Requirements Planning, which allows multiple separate companies to transfer demand planning and transportation requirements between entities, is now extended to a multiple CPU configuration.

Support services available through Data 3 include extended maintenance, software installation, technical support, user training, education services, site-specific technical consulting, and integration of software with other systems.

- Data 3 is repsonsible for the installation and maintenance of its oftware products. In addition, Data 3 offers ASKit, an on-line electronic customer support function of SIM/400 that provides access to a 24-hour-a-day question-and-answer data base for software problem determination, availability of electronic temporary program fixes, and SIM/400 and IBM operating system and program product announcements.

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SIM/400 is sold through direct and indirect sales channels. Affiliates in 22 countries provide localized software sales and support in their markets and have helped Data 3 to obtain major multinational accounts with multiple installations in separate countries. In each of the past two years, more than 60% of Data 3's unit placements have been outside of the U.S.

Industry Markets

The company's software and services revenue market distribution is as follows:

Manufacturing	34%
Business services	19%
Transportation/utilities	14%
Government	10%
Medical/education	7%
Banking and finance	6%
Other	10%
	100%

The remainder of revenue is generated from sales of HP, DEC, and IBM computers sold with ASK manufacturing applications.

The company provides its MANMAN, MAXCIM, and SIM/400 management information systems to discrete and process manufacturing companies. ASK manufacturing clients range from start-ups to Fortune 500 companies.

INGRES products are targeted to Fortune 1000 companies and other large organizations in the manufacturing, automotive, telecommunications, federal, and education sectors.

Approximately half of ASK's revenues are from the DEC market.

Geographic Markets

Approximately 53% of fiscal 1992 revenue was derived from North America and 47% from international sources. A three-year summary of source of revenue follows:

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THE ASK GROUP, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	6/92		6/91		6/90	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
North America	$230.5	53%	$212.3	63%	$170.6	84%
Europe	169.9	40%	103.5	30%	21.4	10%
Other	32.0	7%	24.0	7%	12.2	6%
TOTAL	**$432.4**	**100%**	**$339.8**	**100%**	**$204.3**	**100%**

The company has 84 sales and support offices in North America, Europe, and the Asia/Pacific region.

- U.S. offices are in Arizona, California, Colorado, Connecticut, Florida, Georgia, Illinois, Maryland, Massachusetts, Michigan, Minnesota, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Texas, Washington, and Wisconsin.

- Canadian offices are in Alberta, British Columbia, Ontario, and Quebec.

- Other international offices are in Australia, Belgium, England, France, Germany, Hong Kong, Ireland, Italy, Japan, Malaysia, the Netherlands, Singapore, Switzerland, Taiwan, and Thailand.

The company markets its products and services in North America, Europe, and the Asia/Pacific region through its own sales and marketing organization and those of its wholly-owned subsidiaries.

In addition, The ASK Group markets its products in certain countries primarily through distributors, including distributors in Austria, Brazil, Chile, Denmark, Eastern Europe, Finland, Greece, India, Indonesia, Israel, Japan, Latin America, Malaysia, Mexico, the Middle East, New Zealand, Norway, the People's Republic of China, Poland, Portugal, Spain, Sweden, and Turkey.

SIM/400 is also marketed through a network of 16 affiliates in 22 countries, including Canada, France, Germany, Ireland, Israel, Italy,

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Malaysia, the Netherlands, Portugal, Singapore, South Africa, South Korea, Thailand, and the U.K.

- During fiscal 1992, Data 3 implemented a new independent marketing representative program that permits distribution and marketing of SIM/400 throughout the U.S.

- Current independent marketing representatives are in California, Colorado, and Oregon, with more representatives to be added in fiscal 1993 to augment Data 3's direct sales organization.

Ingres' products are also marketed through systems partners and value-added resellers (VARs) that combine a ported version of INGRES RDBMS or the standard run-time Embedded Version with their own computer hardware or software application packages to create a unique ported product (systems partners) or derivative product (VARs).

Computer Hardware

The company's data center in Sunnyvale (CA) has 20 HP 3000, 20 DEC VAX, one IBM System 38, and three IBM AS/400 systems installed in support of program development, customer and internal support, and ASKNET processing services.

Effective November 1990, the ASKNET remote processing computer center is operated under a long-term contract by Electronic Data Systems.

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INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program

July 1997

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Internet: http://www.astea.com

Astea Europe
De Molen 36
3994 DB HOUTEN
The Netherlands
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President & CEO:	Zack Bergreen
Status:	Public
Employees:	570+ (2/97)
Revenue:	$62,708,000
Fiscal Year End:	12/31/96

Key Points

- Astea International Inc. is a leading provider of customer interaction software (CIS).
- During 1996, Astea acquired Bendata, Inc. and Abalon AB; both sell a single product in their respective CIS market sectors. Astea now claims to hold a 5% share of the global CIS market.
- In August 1996, Astea expanded its international reach and strengthened it Pacific Rim presence by opening four offices in Southeast Asia and Australia. The new offices are located in Brisbane and Melbourne (Australia), Singapore, and Hong Kong.
- In August 1996, Astea and Hissho Iwai Corporation, an $80 billion Japanese conglomerate, announced an exclusive distribution agreement to develop, distribute, and sell the Japanese language version of Astea's help desk solution throughout Japan.
- Astea has recently undergone downsizing in France and Germany to address an operating loss in 1996. Astea will emerge from the restructuring with a fully integrated, Internet-enabled software package: Green Shark.

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Company Description

Founded in 1979, Astea is a supplier of customer interaction software that enables the automation of sales, help desks, field service, and customer support.

The company also provides consultancy, training, and project management, as well as software support and maintenance services.

Astea has been a publicly held company since July 1995, and has since then differentiated itself to support the complete cycle of customer interaction via its two acquisitions.

Astea markets four software products that are based on client/server architecture: Heat, Dispatch-1, PowerHelp, and Abalon.

Operations and Structure

Astea, headquartered in Horsham (PA), has U.S. offices in Atlanta (GA), Bedford (MA), Chicago (IL), Los Angeles (CA), and Seattle (WA). International offices are located in Auckland (New Zealand), Brisbane, Melbourne, and St. Leonards (Australia), Hong Kong, Houten (the Netherlands), Koln (Germany), Paris (France), Singapore, and Tefen (Israel).

The Europe operation was recently downsized after the first-quarter 1997 results, with the closure of a German office and reduction in headcount at the French office.

This restructuring has left Astea in a stronger position with a now fully integrated set of software products and a centralized marketing strategy.

Astea has two subsidiaries:

- Bendata, Inc. is headquartered in Colorado Springs (CO) with an office in Wiltshire (U.K.). Bendata specializes in software for customer support desks.
- Abalon AB has offices in Stockholm and Gothenburg (Sweden). Abalon specializes in software for sales and marketing.

Employees

Astea currently has approximately 570 employees worldwide.

Company Strategy

Astea's mission is *to deliver the most innovative, customer-focused software and services to revolutionize the way companies service their customers and employees.*

Through the acquisitions of Bendata and Abalon, Astea can approach the market with a range of products that fully support the complete customer interaction cycle. This also enables cross-selling of products across each division's customer base to strengthen standing within each market segment.

Astea's multitiered sales strategy comprises:

1. Direct sales in its key vertical markets
2. Partnerships such as those with Oracle and Sybase to expand geographical presence
3. A global network of distributors to encourage and exploit emerging markets

Astea's short-term strategy involves restructuring and integration by moving key personnel, closing low-return offices, and establishing a common marketing style across all its products. Once this is accomplished, Astea expects a return to profitability, at which time it will re-establish its German and French offices.

Astea's long-term strategy involves increasing its worldwide presence through expansion of its direct sales and support infrastructure, and continuing growth through acquisitions, partnerships, and alliances.

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Astea has no plans to alter its expenditure on product development or sales and marketing during 1997.

Acquisitions

Recent acquisitions made by Astea include the following:

- In February 1996, Astea acquired Bendata, Inc. of Colorado (U.S.), for 1.5 million shares of Astea common stock. The acquisition was accounted for as a pooling of interests.
  - Bendata is an international supplier of help desk and customer support center software.
  - The company has more than 1,600 customers worldwide, including Mercedes Benz, ALLTEL, and Chevron.
- In June 1996, Astea acquired Abalon AB of Stockholm (Sweden), for approximately $16 million in cash and Astea common stock.
  - Abalon, founded in 1988, provides software for telesales and telemarketing. It has a base of approximately 250 customers, including Informix and Asea Brown Boveri.
  - Abalon has 60 employees (1996), and is the Scandinavian market leader in sales and marketing automation.
  - Abalon recorded revenue of $6.3 million in 1993, the last year that separate accounts were kept.

Financials

Total 1996 revenue reached $62.7 million, a 16% increase over 1995 revenue of $54.0 million. The company reported net losses of $2.8 million, compared to a net income of $5.2 million in 1995.

- During 1996, expenses of approximately $3.4 million were incurred in connection with the Bendata merger.
- Expenses of approximately $13.8 million were charged for purchased research and development in connection with the Abalon purchase during 1996.

A four-year financial summary is shown in Exhibit 1 on the following page.

Product development expenditures were approximately $8.0 million (13% of revenue) in 1996, compared to $4.2 million (8% of revenue) in 1995. Increased product development expenditure is due to Green Shark and Astea's commitment to enhancing established products.

Interim Results

Revenue for the six months ending June 30, 1997 reached $28.4 million, an 8% increase over $26.4 million for the same period in 1996. Net losses for the period, after restructuring and one-time charges in the first quarter, were $18.6 million, compared to a pro forma net loss of $2.3 million during the same period the previous year.

- Software license fees were $10.1 million for the period, compared to $11.4 million for the same period in 1996.
- Service and maintenance fees rose to $18.3 million, compared to $15.0 million for the same period the previous year.

One-time charges during the first quarter included $0.5 million for the write-off of certain capitalized software products, $2.6 million to settle certain disputes, $2.1 million for the write-off of goodwill, and a restructuring charge of $5.3 million.

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Exhibit 1

Astea International Inc.
Four Year Worldwide Financial Summary
($ Millions, except per-share data)

Item	Fiscal Year 1996	1995	1994	1993
Revenue	62.7	54.0	27.3	14.6
• Percent change from previous year	16.2%	97.3%	87.4%	3.3%
Income (loss) before taxes	(4.7)	8.5	3.3	1.3
• Percent change from previous year	(a) (55%)	254%	262%	281%
Net income (loss)	(2.8)	5.2	1.8	1.0
• Percent change from previous year	(54.4%)	190%	75%	N/A
Earnings (loss) per share	(0.22)	0.45	0.19	0.09
• Percent change from previous year	(49%)	137%	111%	N/A

Source: Astea International Inc.

(a) Includes one-time charges of $3.4 million in expenses related to the Bendata merger transaction and $13.8 million for purchased research and development related to the purchase of Abalon.

Revenue Analysis by Product/Service Mode

Astea derives revenue from two sources: license fees from its software products, and service and maintenance, which also encompasses consulting, implementation, and training.

A three-year summary of source of revenue is shown in Exhibit 2.

Exhibit 2

Astea International Inc.
Three-Year Source of Worldwide Revenue Summary by Product/Service Mode
($ Millions)

Product/Service	1996 Revenue $	1996 Percent of Total	1995 Revenue $	1995 Percent of Total	1994 Revenue $	1994 Percent of Total
License Fees	$28.9	46%	$29.9	55%	$15.5	57%
Service and Maintenance	33.8	54%	24.1	45%	11.8	43%
Total	$62.7	100%	$54.0	100%	$27.3	100%

Source: Astea International Inc.

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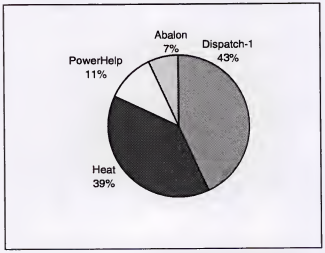
- The growth of service and maintenance revenue is due to the increased need for professional services resulting from new sales of Dispatch-1 and multiproduct packages. Both of these products require ongoing implementation and servicing.

- The decline in license fee revenue is due to increased competition and a fall in large volume purchases. However, revenue from help desk licenses actually increased despite the overall decrease.

Exhibit 3 shows that the majority of Astea's license fee revenue originates from Dispatch-1 and Heat. Abalon, despite contributing only 7% to license fee revenue, is considered a robust product whose sales will improve as Astea strengthens its presence in Europe.

Exhibit 3

Astea International Inc.
License Fee Revenue Split by Product, 1996



Source: Astea International Inc.

Geographic Markets

Exhibit 4, on the following page, shows a three-year summary of worldwide revenue by geographic area and service mode, which highlights a number of facts:

- The recent switch in demand for service and maintenance over software in the U.S. market.

- In 1996, service and maintenance revenue contributed the greater share of total revenue across all three geographic areas.

- Two thirds of Astea's business originates in the U.S.

Key Products and Services

Astea markets four products that together fully support all areas of the customer interaction cycle.

Astea sees this cycle as (1) beginning with informing and convincing new customers via marketing and sales, to (2) fulfilling expectations via delivery of the product, to (3) maintaining customer satisfaction via after-sales service.

Exhibit 5 is schematic of Astea's products. Each part of the cycle is serviced by one of Astea's products.

Abalon

Abalon is a sales and marketing automation package composed of several modules built around a central database. Customers choose the appropriate modules, then normally pay between $1,500 and $3,000 per designated user. The modules include applications for telemarketing, telesales, field sales, customer training, and billing.

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Exhibit 4

Astea International Inc.
Three-Year Worldwide Revenue Summary
by Geographic Area and Service Mode
($ Millions)

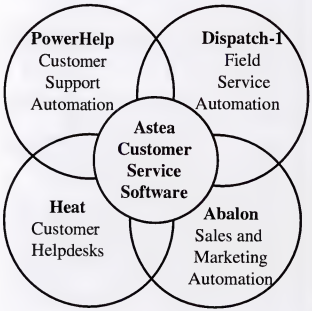
Product/Service Mode	Fiscal Year					
	1996		1995		1994	
	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
U.S.: Software	$19.0	30%	$24.3	45%	$15.4	56%
U.S.: Service	23.4	37%	18.5	34%	11.5	42%
U.S.: Total	42.4	68%	42.8	79%	26.9	98%
Europe: Software	5.7	9%	4.7	9%	N/A	N/A
Europe: Service	5.9	9%	4.3	8%	N/A	N/A
Europe: Total	11.6	18%	9.0	17%	N/A	N/A
Rest Of World: Software	4.1	7%	0.9	2%	0.1	1%
Rest Of World: Service	4.6	7%	1.2	2%	0.3	1%
Rest Of World: Total	8.7	14%	2.1	4%	0.4	2%
Total	$62.7	100%	$54.0	100%	$27.3	100%

Source: Astea International Inc.

* *Percentages are rounded.*

Exhibit 5

Astea Software Range



Other modules enable Abalon to access the Internet and allow sales teams to connect to the system via a mobile phone.

Abalon accounted for 7% of Astea's license fee revenue in 1996 and has been installed with over 250 customers, mainly in Scandinavia.

The sales and marketing of Astea's Abalon product has now passed the "planning stage" (according to Astea's Annual Report 1996) and revenue is expected to increase considerably.

Dispatch-1

Astea's original product is still its best selling, with 43% of license fee revenue, as shown in Exhibit 4.

Dispatch-1 is a field service software product that enables automation of operations such as

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product distribution and depot management, as well as logistics, administration, and financials.

Modules are also available that increase the capabilities of the base product. Some of these modules are: *Remote-1*, which gives field technicians remote wireless access to the software; *Manager's Window*, which allows managers to track their technicians in the field; and *Customer Access*, which gives customers access to Dispatch-1 in order to place parts orders, track service requests, and obtain progress updates.

Heat

Heat is Astea's customizable help desk product, which accounted for 39% of 1996 license fee revenue.

Heat aids end users in resolving problems, managing the flow of calls, and improving tracking, as well as automating alert conditions and analyzing trends.

PowerHelp

PowerHelp is Astea's solution for automating telephone-based customer support. It enables clients to analyze, direct, and resolve customers' technical queries.

PowerHelp supports a range of media such as video, scanned images, animation or graphics in order to help resolve the problem. PowerHelp also enables remote access to customers to allow electronic tracking of support calls. Customers' calls can be analyzed to assess staff efficiency and identify problem areas.

Green Shark

Astea has developed an integrated single architecture that will support both Astea and Microsoft software and enable the use of Web applications by clients and customers.

Based on industry standards, the Green Shark architecture enables users to share information between interfaced applications and allows additional software to be integrated when appropriate.

Green Shark products will be available toward the end of 1998, by which time PowerHelp will have been phased out to give Heat greater access to the market.

Marketing and Sales

Astea sells into a variety of markets, including telecommunications, electronics, medical technology and controls and instrumentation.

Astea discovered through its restructuring in early 1997, the necessity of different skills and techniques in marketing the individual products and the Green Shark package as a whole. Hence, a large budget has been allocated for the diverse sales and marketing team needed to maximize market penetration.

Clients

Astea's client base of approximately 3,500 companies and 75,000 end-users include the following:

Dispatch-1

- Granada, U.K.
- Bull Information Systems, France
- Motorola Pager, U.S.
- Bay Networks, U.S.
- Kodak Technical Services, Inc., U.S.
- ICL Sorbus, U.K.
- Alfa Laval, Sweden
- Philips Medical systems, the Netherlands
- AT&T Global Information Solutions, U.S.

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Abalon

- Sun Microsystems, Europe
- Eircell, Ireland
- NCC AB, Sweden
- Ericsson Mobile Communication AB, Sweden

PowerHelp

- AGFA, Germany
- Cogema, France
- Rockwell Automation, U.K.
- Genesys Health Systems
- City of Philadelphia, U.S.

Alliances

Astea has various partnerships and alliances with companies such as ARDIS, Fulcrum Technologies, Hewlett-Packard, Inference, Intermac, KnowledgeBroker, Inc., Motorola, Oracle Corporation, PowerSoft, Progress, RAM Mobile Data, Radio Paging America, ServiceWare, SkyTel, SMI, Sun Microsystems, Sybase, and Vertex.

Recently, Astea has concluded discussions with the Japanese company Nissho Iwai Corporation to develop and distribute a Japanese language version of Astea's help desk software.

Astea's Bendata has developed, in partnership with Asset Software International, an additional module for its help desk product Heat. Called Workgroup Asset Manager, it enables Heat users to see and manage a customer's assets.

Competition

Some of Astea's competitors include:

Dispatch-1: Astea faces competition from companies such as Pinnacle Computer Systems Limited and SAP.

Abalon: Astea faces established competitors such as Siebel Systems Inc., Aurum Software Inc., The Vantive Corporation, and Scopus Technology Inc.

Heat and PowerHelp: Larger publicly-owned competitors include: Clarify, Inc., Remedy Corporation, The Vantive Corporation, and Scopus Technology Inc.

INPUT Assessment

Astea has taken a relatively high risk stance in its purchases of Bendata and Abalon in close succession. In conjunction with restructuring, this resulted in losses in 1996 that continued into 1997 ($13.8 million). Despite the advantage that Astea now has in terms of its product range and market position, the wisdom remains to be seen in making expensive acquisitions so close together without fully integrating the companies first.

However, if Astea can overcome the indigestion from these acquisitions, the company's prospects look bright. By providing an integrated suite of products that address all aspects of the customer interaction cycle, the company has created a differentiated product offering in an increasingly congested and fragmented market place.

Over time, INPUT expects this marketplace to consolidate, with fewer, larger players offering more comprehensive customer service product offerings Here, larger customers will require integrated software packages, and in this respect, Astea's Internet-enabled Green Shark product strategy appears to be ahead of the game.

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INPUT®

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

November 1996

A.T. Kearney, Inc.

Chairman: Gary Fernandes
CEO: Fred Steingraber
222 West Adams Street
Chicago, IL 60606
Phone: (312) 648-0111
Fax: (312) 223-6200
Internet: http://www.atkearney.com

ATKEARNEY

Status:	Subsidiary
Parent:	EDS
Employees:	3,600 (10/96)
Revenue:	$650,000,000
Fiscal Year End:	12/31/95

Key Points

- A.T. Kearney, Inc. is a global, multi-disciplined, general management consulting and executive search firm.
- In July 1996, A.T. Kearney and EDS announced the joint formation of the Business Enterprise Solutions Team (BEST), a new team of several hundred enterprise applications specialists dedicated to assisting clients in the adoption and strategic use of transformational information technologies, including integrated enterprise-wide application packages, data warehousing, and decision support systems.
- In June 1996, A.T. Kearney acquired the consulting staff of Cannon Associates, a management consulting firm based in Moscow (Russia) and Washington D.C.
- In September 1995, EDS completed the acquisition of A.T. Kearney.
  - Subsequent to the closure of the acquisition, the Management Consulting Services (MCS) division of EDS was absorbed into A.T. Kearney.

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- This merger increases A.T. Kearney's industry capability and practice resources, as well as strengthening the firm's information technology expertise.

Company Description

Founded in 1926, A.T. Kearney is celebrating its seventieth year in operation. The firm is one of the leading global management consulting firms, providing business and market strategy, benchmarking and best practices analysis, business process reengineering, manufacturing and operations improvement, organizational effectiveness, global sourcing and logistics, and supply chain management.

In September 1995, A.T. Kearney became an independent wholly owned subsidiary of EDS, a leading technology services provider.

- According to the terms of the agreement, EDS paid approximately $113 million in cash and $162 million in short- and long-term notes to A.T. Kearney shareholders. In addition, the terms included restricted stock grants of approximately 6.6 million shares of Class E Common Stock that will vest over a ten-year period for certain A.T. Kearney personnel.

- A.T. Kearney maintains its own board of management and board of directors.

- Subsequent to the closure of the acquisition, the Management Consulting Services (MCS) division of EDS was absorbed into A.T. Kearney.

- This merger doubled the size of A.T. Kearney and increased its offerings to the automotive, communications, financial services, aerospace, utilities, health care, and electronics industries. It also provided A.T. Kearney with an extended presence in Argentina, Venezuela, New Zealand, and the Philippines.

- EDS offers management and operation of computers, networks, information systems, information processing facilities, business operations, and related personnel.

- EDS, headquartered in Plano (TX), serves customers in 42 countries and has more than 95,000 employees. EDS reported revenue of $12.4 billion for the year ending December 31, 1995.

Organization and Structure

Headquartered in Chicago (IL), A.T. Kearney has offices in 60 cities within 30 countries throughout the Americas, Europe, and the Asia/Pacific region.

Within North America, offices are located in Alexandria and Rosslyn (VA), Atlanta (GA), Boston and Cambridge (MA), Cleveland (OH), Coraopolis (PA), Costa Mesa, Los Angeles, San Diego, San Francisco, Santa Clara, and Redwood City (CA), Dallas, Houston, and Plano (TX), Denver and Englewood, (CO), Southfield (MI), Mexico City (Mexico), Miami (FL), Minneapolis (MN), New York (NY), Phoenix (AZ), Ottawa and Toronto (Canada), St. Louis (MO), and Stamford (CT).

South American locations are in Buenos Aires, Caracas, and Sao Paulo.

European offices are located in Amsterdam (the Netherlands), Milan (Italy), Berlin, Dusseldorf, Munich, and Stuttgart (Germany), Brussels (Belgium), Copenhagen (Denmark), Helsinki (Finland), Lisbon (Portugal), London (U.K.), Barcelona and Madrid (Spain), Moscow (Russia), Oslo (Norway), Paris (France), Stockholm (Sweden), and Warsaw (Poland).

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Offices in the Asia/Pacific region are located in Beijing (Republic of China), Hong Kong, Kuala Lumpur (Malaysia), Melbourne and Sydney (Australia), Seoul (Korea), Singapore, Tokyo (Japan), and Wellington (New Zealand).

In addition, the firm has affiliates in India, the Middle East, and Central America.

A.T. Kearney is organized by industry practices as follows:

- Aerospace and Defense Industry Practice
- Global Automotive Practice
- Telecommunications Practice
- Consumer Products Practice
- Financial Institutions Group (FIG)
- Chemicals/Pharmaceuticals/Health Care Practice
- Oil and Gas Industry Practice
- Global Transportation Industry Practice
- Utilities Industry Practice
- Strategic Information Technology Practice
- Strategic Sourcing Practice

The A.T. Kearney Executive Search division, founded in 1946, seeks and places senior executives with clients to serve as Directors of Boards, CEOs, CFOs, COOs, CIOs, Presidents, Vice Presidents, or Directors, or in other senior leadership roles.

Company Strategy

The firm's strategy in the recent merging of resources of EDS and A.T. Kearney was to allow the firm to provide clients with a full continuum of services—from strategic consulting to operational strategy to implementation, strengthened by information technology services.

The firm has three main goals:

- Growth—To provide scale and scope of resources
- Globalization—Creating a global set of standards for uniformly superior service worldwide
- Leadership—Representing the firm's focus on adding substantial value for its clients by delivering tangible results

A.T. Kearney's mission is to help its clients gain and sustain a competitive advantage. To achieve this mission, the firm's core strategy focuses on three factors:

- Superior people—The firm strives to recruit and develop personnel with outstanding industry experience and educational credentials, creativity, and leadership, problem-solving, teamwork, and communication skills.
- Superior products—Products and methodologies are designed to help clients focus on the most effective consulting options. Through the centers of excellence, the firm invests five to ten percent of revenue in education and training for its personnel worldwide.
- Superior performance—The firm is committed to providing a high return on its clients' investments and improvement in its clients' competitive positions.

A.T. Kearney is committed to high quality and continuous improvement in the service provided. In each engagement, an A.T. Kearney vice president is actively involved. The firm's structured and quality improvement program is directed by an independent senior officer and includes internal peer reviews and independent client quality reviews at several stages. Client

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quality ratings are a key component in consultants' annual performance appraisal.

Financials

A.T. Kearney's 1995 revenue grew to more than $650 million, compared to revenue of $346.3 million in 1994, prior to the merger.

The firm expects revenue to reach approximately $850 million in 1996.

Revenue Analysis by Product/Service

In 1996, A.T. Kearney's year-to-date revenue has been derived from the firm's five key service areas approximately as follows:

Corporate strategy	35%
Organizational design	20%
Operations management	20%
IT strategy	15%
Marketing and sales	10%
	100%

Market Financials

A.T. Kearney operates in nearly every major growth industry, including all segments of the aerospace, automotive, communications, consumer goods, energy, financial services, government, health care, insurance, manufacturing, pharmaceuticals, retail, and transportation industries.

Geographic Markets

In 1995, $370 million (approximately 57%) of the firm's revenue was derived from the U.S., and more than $280 million (approximately 43%) was derived from international sources.

In 1996, A.T. Kearney's year-to-date revenue has been segmented approximately as follows:

The Americas	50%
Europe	35%
Asia Pacific	15%
	100%

Acquisitions

In June 1996, A.T. Kearney acquired the consulting staff of the Moscow (Russia) and Washington D.C.-based management consulting firm, Cannon Associates. The terms of the agreement were not disclosed.

- This acquisition is intended to increase A.T. Kearney's presence in emerging markets, especially in Russia and the Commonwealth of Independent States.
- Cannon will serve as, and be head of, A.T. Kearney's newly formed market development and client service group related to work in emerging countries.
- Cannon now has a permanent Moscow staff of 45.

Employees

As of October 1996, A.T. Kearney had 3,600 employees worldwide, 2,500 of which were consultants.

Key Products and Services

A.T. Kearney provides services in the following industry and functional practice areas:

Global Automotive Practice—This group provides strategy and operational consulting, systems integration, and other management consulting services for leading automotive OEMs, suppliers, and vehicle and parts distributors.

- Among the automotive practice's areas of expertise are:
  - Strategic sourcing and supply chain integration
  - Benchmarking and best practices analysis
  - Marketing, sales, and distribution strategy

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- Systems integration, including implementation of integrated application systems such as SAP's R/3 or Baan Company's TRITON packages
- Process management and organizational effectiveness
- Business transformation/business process reengineering
- Information technology implementation

- Based in Detroit (MI), the automotive group has offices in 20 cities on four continents, and employs more than 300 dedicated automotive industry consultants.
- This is A.T. Kearney's largest industry practice.

Telecommunications Practice—Management consultants assist clients in decision making and implementation of solutions regarding issues caused by the convergence of the information, communications, and entertainment industries.

- This group provides services in the following areas:
  - Electronics
  - Telecommunications
  - Wireless
  - Publishing
  - On-line transaction services
  - Entertainment
- Capabilities include:
  - Business strategy and planning
  - Market research and competitive assessment
  - New product development
  - Revenue enhancement
  - Regulatory and legislative strategies
  - Financial modeling
  - Economic policy and planning
  - Mergers, acquisitions, and partnerships
- Consultants have communications and electronics expertise in North America, Europe, and the Asia/Pacific regions, serving clients in all major industries.

Consumer Products Practice—This group provides consulting to help senior management in the consumer products industry with complex strategic, operational, and organizational issues.

- Areas of expertise include:
  - Development of strategies to respond to market discontinuities
  - Fundamental restructuring of the cost base
  - Managing major organizational change
  - Design of store-level micro-marketing and category management strategies
  - Customer satisfaction evaluation
  - Retail front-end technology assessment
  - Store order-process redesign for improved inventory control
- The consumer products group has provided consulting services to companies at all points along the value chain—manufacturers, retailers, and consumers.
- General merchandise experience in the consumer products industry includes grocery products, consumer electronics, major and small appliances, health and beauty aids, apparel, home and garden equipment, sporting goods, photographic equipment, books, toys and games, and footwear.

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- Experience with leading retail technology issues includes:
  - Point-of-sale systems
  - Payment systems
  - Warehouse and inventory control systems
  - Voice, data, and video-linked systems
  - Decision support software
- The consumer products group accounts for more than 20% of A.T. Kearney's total worldwide billings.

Financial Institutions Group (FIG)—This group provides a full range of management consulting services to leading financial organizations. The group's areas of expertise include:

- Electronic banking/alternative delivery channels
- Techno-market driven strategies
- Revenue generation
- Merger and acquisition strategy
- Postmerger integration
- Alliance setting
- Organizational effectiveness
- Cost reduction/operational improvement

Chemicals/Pharmaceuticals/Health Care Practice—This group provides consulting services to major global pharmaceutical companies, as well as energy and refined products companies with chemical subsidiaries and industry groups.

- The group services all sectors of the chemical and process industry, including:
  - Basic/commodity petrochemicals
  - Polymers
  - Plastic/advanced materials
  - Specialty chemicals
  - Fine chemicals
  - Pharmaceuticals
  - Inorganics
  - Agricultural chemicals
- Consultants possess both general business capabilities and more specific capabilities tailored to address the industry's technology issues and specific concerns.
- This group has completed more than 500 engagements in the chemical industry worldwide in the past five years.

Oil and Gas Industry Practice—The oil and gas practice provides services to all major segments of the oil and gas industry.

- Clients include fully integrated major oil and gas companies, independent companies, as well as oil field service and equipment, pipeline, and refining and marketing companies.
- Segments of the industry value chain for which the oil and gas group has worked include:
  - Exploration and development
  - Field operations and maintenance
  - Administrative services
  - Sourcing and procurement
  - Logistics and transportation
  - Refining
  - Retail marketing
  - Pipeline
  - Oil field services and equipment

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- Functional expertise and capabilities include:
  - Strategic sourcing
  - Maintenance and operations effectiveness
  - Logistics and supply chain management
  - Technology management
  - Transportation
  - Business process reengineering/change management
  - Organizational effectiveness
  - Business and marketing strategy
  - Environment, health, and safety
- This group has completed more than 200 engagements in the oil and gas industry worldwide in the past five years.

Global Transportation Industry Practice—Consultants work with transportation and logistics services companies in every mode, market segment, and geographic area, including rail/intermodal, motor carrier, aviation, contract logistics, equipment manufacturing, and maritime.

- This group focuses on corporate strategy and also assists clients on operations, marketing, and organizational issues.
- Services experience includes the following:
  - Market entry and strategy
  - Operations improvement
  - Customer service strategy
  - Pricing
  - Cost reduction
  - Merger/acquisition strategy
  - Value-added logistics services
  - Competitive analysis
  - Information technology
  - New product development
  - Restructuring and privatization
  - Strategic sourcing

Utilities Industry Practice—Consultants provide a range of management consulting services from strategic insights to organization and operations, culminating in implementation with information technology experience.

Proprietary methodologies employed include:

- Strategic sourcing
- Supply chain integration
- Business process reengineering

Strategic Information Technology Practice—This group's principal function is the smooth integration of IT-based business transformation, from business strategy through business operations improvement, strategic IT sourcing, implementation, diagnostics, deployment, and the continuous improvement process.

This group has developed a technology consulting approach that includes:

- Core strength in all areas of technology consulting, implementation, and management, including:
  - Strategic consulting
  - Operations and organizational design
  - Technology blueprinting
  - Deployment
  - Technology enablement
  - Testing
  - Ongoing process/technology management

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- Emphasis on rapid delivery to realize the business value of new systems quickly
- Expertise in solutions available from a wide variety of potential vendors, including SAP AG, Manugistics Corp., Marcam, Oracle, and Baan Company
- Expertise in providing a full scope of enterprise-wide technology solutions, including:
  - Executive information systems
  - Decision support systems
  - Data warehousing
- A mix of industry, operations, and IT implementation experts on each engagement

In July 1996, A.T. Kearney and EDS jointly created the Business Enterprise Solutions Team (BEST), a special team of 200 systems engineering experts in North America, Europe, and Asia with expertise in the implementation of client/server technologies from SAP AG, Oracle Systems Corp., Baan Company and other enterprise computing vendors.

Strategic Sourcing Practice—Consultants apply the strategic sourcing methodology pioneered by A.T. Kearney to improve the performance of organizations by examining the processes related to their external purchases and determining what should be sourced and how to source it.

- Strategic sourcing brings the software and supplier databases to the client to improve global sourcing activities.
- Consultants help clients to evaluate alternative strategies such as offshore sourcing and manufacturing, and make or buy options, then helps them to optimize vertical integration.

Clients

A.T. Kearney's clients range from international conglomerates to domestic companies in a variety of businesses—manufacturing, service, nonprofit organizations, and government.

The firm's corporate clients are typically companies with $500 million or more in annual revenue. The firm has worked for more than 70% of the Fortune 1000 companies and their equivalents outside the U.S.

A sampling of A.T. Kearney clients includes Sears, Eli Lily, General Motors, Chase Manhattan Bank, Rolls Royce, Bank of America, Philip Morris, Brystol Meyer Squibb, Westpac, the City of Wellington, and Slovenia.

Marketing and Sales

A.T. Kearney's Marketing and Communications Department supports global advertising, public relations, sales and marketing, and collateral development on a corporate and global basis.

This group is supported by field marketing managers who work to support each industry and functional services practice area. This group of marketing managers has a dotted-line relationship with the Marketing and Communications Department.

Competition

A.T. Kearney considers the following companies its key competitors: McKinsey & Company; Booz, Allen and Hamilton; The Boston Consulting Group; Bain & Company; and Andersen Consulting.

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Assessment

A.T. Kearney considers its key strengths to include:

- Tangible results derived from the client's business in three areas: economics, relationship development, and market development
- Business and operational strategy consulting
- IT strategy consulting

Some of the key challenges faced by the firm include the following:

- Leveraging A.T. Kearney's relationship with EDS without losing its brand identity or perception of objectivity
- Retaining and recruiting consultants of the highest quality

Parent Company

EDS
5400 Legacy Drive
Plano, TX 75024
Phone: (214) 605-6000
Revenue: $12,422,100,000 (12/31/95)

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INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program

June 1997

Atos Group

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3, Place de la Pyramide
92067 Paris La Defense Cedex
France
Phone: +33 1 49 00 90 00
Fax: +33 1 47 73 07 63
Internet: http://www.atos-group.com

Chief Executive Officer:	Bernard Bourigeaud
Status:	Public
Employees:	8,500
Revenue (for 1996):	FF 6,200,000,000
Fiscal Year End:	9/30/96

Key Points

- Atos is a leading France-based provider of IT services in France and internationally. Approximately a third of the company's revenue is generated outside France, with Germany as the biggest market.
- Atos is the new name of the company created from the merger of Axime, Sligos, and the outsourcing business of ADP-GSI. The legal merger takes place on 1 July 1997.
- Atos has a strong heritage in the banking, finance, and insurance sectors. The ADP-GSI acquisition provides Atos with a foothold in other industry sectors.
- The company is seeking to expand its international business, with initial priority given to Germany, the U.K., and Spain.

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Company Description

Axime and Sligos announced their intention to merge in October 1996. This action united the second and third largest IT services companies based in France.

- Sligos was created in 1974 through the merger of Sliga, a subsidiary of Credit Lyonnais, and Cegos Informatique. The company had revenue in 1996 of FF 4 billion.

- Axime Group was founded in 1990 as a result of the merger between the French companies FITB, Séguin, and Sodinforg. In fiscal 1996, the company had revenue of FF 2.1 billion.

In December 1996, Axime also bought ADP-GSI's outsourcing business, which now forms an important part of Atos.

A major part of Axime's service portfolio was processing services, such as payment systems, telematics, and securities processing.

The Sligos organization brings a heritage in computerized funds transfer, smart cards, and other bank and finance transactions to Atos Group.

The outsourcing business from ADP-GSI provides Atos with capabilities in the manufacturing, transport, and distribution sectors, and expands the company's business in the U.K.

Operations and Structure

Atos' main shareholder is Compagnie Financiere de Paribas, which owns a 13.2% interest. The rest of the shares are held by large institutional investors and the public. Atos is listed on the monthly settlement market of the Paris Bourse.

Atos has 8,500 employees and is now the fifth-largest European-based IT services company. The company has operations in France, Germany, Italy, Spain, Switzerland, Benelux, Portugal, and the U.K.

Exhibit 1 shows the senior management of Atos Group.

Exhibit 1

Atos Group
Key Executives

Name	Position
Henri Pascaud	Chairman of the Supervisory Board
Bernard Bourigeaud	Chairman of the Executive Board & CEO
Dominique Illien	Vice Chairman of the Executive Board & COO
Alain Bridenne	Exec. VP, Professional Services & Systems Integration
Francis Delacourt	Exec. VP, Outsourcing
Guy Fourneau	Exec. VP, Services
Eric Guilhou	VP, CFO
Jean-Luc Lenart	VP, Strategy & Development
Jean-Marie Vezin	VP, Human Resources

Source: Atos

Atos is divided into four operating divisions:

- Professional Services & Systems Integration, which is the largest division with 3,600 employees

- Services, with offerings in areas such as processing services and call centers. This division has 3,250 employees.

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- Outsourcing, which covers all outsourcing and facilities management services, with 1,300 employees
- Multimedia, which offers services such as Internet and intranet technologies, on-line services, electronic commerce, and value-added network services

Company Strategy

Atos generates almost half its revenue in the banking and finance sector. However, the company is also targeting other industry sectors where the deployment of IT is important for providing better customer service and gaining competitive advantage. Atos' focus markets are:

- Banking, finance, and insurance
- Telecommunications and media
- Utilities
- Retail
- Automotive
- Transportation
- Healthcare

Currently, the company generates 27% of its revenue outside France. Atos is committed to continuing its international expansion, especially in Europe. The company intends to fulfill this by:

- Supporting its large European customers in their international expansion
- Strengthening its position where it already has operations, particularly in Germany and the U.K.
- Expanding in the U.S. through partnerships that will introduce Atos' products and services in this market

Acquisitions/Divestitures

Acquisitions

The major recent activity in this area is the merger of Sligos and Axime. Under the terms of the merger, Axime offered a share exchange of six Axime shares for five Sligos shares. The share exchange was launched in December 1996 and had a value of around $670 million. As mentioned earlier, the legal merger will take effect on 1 July.

In December 1996, Axime acquired the outsourcing arm of ADP-GSI for approximately $38 million. This acquisition expanded Axime's outsourcing operations, principally in France and the U.K. The focus markets of this operation are transport, distribution, and manufacturing, with annual revenue of around $120 million. The outsourcing business, which was originally part of GSI, was considered non-core since ADP acquired GSI in 1995, explaining the low acquisition price.

Other recent acquisitions include:

- January 1997-Intelco and Q-Bos
- November 1996-Penny Dialogmarketing
- October 1996-Phonepermanence

Divestitures

In December 1996, Axime sold its subsidiary Axime Ingenierie SA with 1,000 employees and revenue of around $65 million to Logica Plc for £18.4 million.

In November 1996, Sligos disposed of its Solaic subsidiary, a smart card manufacturer, which was considered non-core to the strategic direction of Atos.

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Financial Information

Atos Group's fiscal year end is 30 September. Since Axime's financial year was to 30 June and Sligos followed the calendar year, this makes financial analysis of the new company difficult at this stage.

Atos has reported that for the first six months of its FY97, ending 31 March 1997, the company had revenue of FF 3,168 million, excluding sales from discontinued operations and including acquisitions. This represented an increase of 20.9% over the revenue calculated for the same period a year earlier. Of the revenue growth, 6.8% came from organic growth in Sligos and Axime, while 14.1% was from acquisitions.

In the second quarter of the period, revenue grew by 20.2% over 2Q96, of which 5.9% was from organic growth. Acquisitions accounted for 14.3% of the increase, mostly accounted for by the acquisition of ADP-GSI's outsourcing business.

Exhibit 2 shows Axime's revenue for the past five financial years. In FY96, Axime reported a net profit of 135 million francs.

Exhibit 3 provides an overview of Sligos' revenue from 1992 to 1996. For 1996, Sligos reported a net result before goodwill and merger costs of 242 million francs.

Atos forecasts revenue for FY97 of FF 6.3 billion, which is almost flat over a calculated 1996 revenue figure that includes the ADP-GSI outsourcing business.

Exhibit 2

Axime
Five-Year Revenue Summary (FYE 30 June)

Year	FY92	FY93	FY94	FY95	FY96
Revenue (FF Billion)	2.2	1.9	1.8	2.1	2.1
Revenue ($ Million)	423	365	346	404	410
Percent change from previous year	0%	14%	0%	11%	2%
Revenue per employee (FF Million)	N/A	0.758	0.712	0.791	N/A
Revenue per employee ($ Million)	N/A	0.146	0.137	0.152	N/A

a) Exchange rate used is 5.2 FF to 1 U.S.$ *Source: INPUT*

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Exhibit 3

Sligos
Five-Year Revenue Summary (FYE 31 December)

Year	FY92	FY93	FY94	FY95	FY96
Revenue (FF Billion)	3.64	3.81	4.1	4.3	4.0
Revenue ($ Million)	700	733	788	827	769
Percent change from previous year	11%	13%	8%	5%	-8%
Revenue per employee (FF Million)	0.637	0.612	0.656	0.680	N/A
Revenue per employee ($ Million)	0.123	0.118	0.126	0.131	N/A

a) Exchange rate used is 5.2 FF to 1 U.S.$

Source: INPUT

Exhibit 4 shows projected revenue by operating division, as provided by Atos.

Exhibit 4

Atos Group
FY97 Revenue by Operating Division
(FF Billions)

Division	Revenue	Percent of Total
Professional Services and Systems Integration	2.3	36%
Services	2.2	36%
Outsourcing	1.2	20%
Multimedia	0.53	8%
Total forecasted revenue	6.3	100%

Source: Atos

Market Analysis

Exhibit 5 shows INPUT's estimate for Atos' calculated 1996 revenue by service mode. The estimates includes the effects of recent acquisitions/divestitures.

Exhibit 5

Atos Group
Revenue by Service Mode,
1996 ($ Millions)

Service Mode	Revenue	Percent of Total
Processing Services	310	25%
Outsourcing	230	19%
Systems Integration	200	17%
Professional Services	180	15%
Network Services	155	13%
Customer Services	60	5%
Other	60	5%
Total Software and Services	1,200	100%

a) Exchange rate: FF 5.2 to 1U.S.$

Source: INPUT estimates
Numbers are rounded

Exhibit 6 shows the forecasted division of revenue by industry sector, as provided by Atos.

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Exhibit 6

Atos Group
FY97 Revenue by Industry Sector
($ Millions)

Industry Sector	Revenue	Percent of Total
Banking, Finance & Insurance	600	48%
Manufacturing	188	15%
Telecommunications & Media	162	13%
Government Services and Utilities	137	11%
Automotive Transport	88	7%
Retail Distribution	75	6%
Total Software and Services	1,250	100%

a) Exchange rate: FF 5.2 to 1U.S.$

Source: Atos and INPUT Estimates

Geographic Markets

Strategic directions for Atos include expanding its business outside its domestic market. Exhibit 7 shows Atos' revenue by country for FY97.

Exhibit 7

Atos Group
Revenue by Region
FY97 ($ Millions)

Region	Revenue	Percent of Total
France	912	73%
Germany	213	17%
Rest of Europe	125	10%
Total	1,250	100%

Source: Atos

Key Products and Services

Atos offers a wide range of information services with particular focus on the banking and finance sector. The following provides an overview of the company's main services by operating division.

Services

Atos' activities in this division fall into the following main areas:

- Call centers-Atos has more than 1,000 full-time operators handling more than 15 million calls a year.
- Direct marketing, including logistical services and database management
- Transaction processing services, which include on-line collection of card and check transactions, management of ATMs, and enabling secure access to electronic distribution channels such as EDI and the Internet. The company manages almost 1.5 billion transactions a year.
- Check and other document processing services, including interbank payment tickets. Atos also offers high-security document printing and the management of contracts, subscriptions, invoicing, and payments. The company processes more than a billion documents a year.

Atos' services customers include American Express, Berliner Bank, Esso, Societe Generale, Telefonica, and Volkswagen.

Outsourcing

Atos' outsourcing services cover:

- Integrated outsourcing, through which Atos offers to manage the operation of all or part of the customer's IT installation. Services cover both mainframe and distributed systems, including

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consulting, applications management, and operations management. The company will include standards for performance, quality, upgradeability, and reversibility in its contracts.

- Specialized outsourcing, such as managing processes for securities trading for banks and stock brokers. Specialized outsourcing involves operations, applications, and distributed systems management.

Under its applications management services, Atos will design and install new systems as well as making existing applications compliant to Year 2000 and the single European currency.

The acquisition of ADP-GSI's outsourcing business approximately doubled the combined Axime/Sligos activities in this area. The company is now among the largest outsourcing companies in France.

Customers of Atos' outsourcing services include BNP, Credit Lyonnais, Milk Marque, Potain, and Societe de Bourses Francaises.

Professional Services & Systems Integration

Atos offers a full range of services for designing, developing, installing, and maintaining information systems, such as:

- Systems integration projects
- Networks
- Consulting, technical support, and training
- Multiyear services, such as applications maintenance and network support provided under three- to five-year contracts with guaranteed performance standards, and often provided as a natural extension to systems integration contracts

Atos' systems integration expertise includes the following areas:

- Securities trading rooms
- Electronic fund transfer systems
- Banking software
- Network communications management between software packages
- Integration of intelligent networks for telecom operators

Atos' technology portfolio includes Teknekron, the world's most frequently used trading room software, and the installation of integrated management systems, such as SAP and MFG/PRO.

The company also has experience in developing customized payment systems and point-of-sale systems.

Among the major customers of this part of Atos' business are the European Commission, Deutsche Bank, Fiat, France Telecom, Global One, and Swiss Telecom.

Multimedia

Atos has a large multimedia information retrieval center from which it offers a number of services. These include:

- On-line services
- Electronic commerce
- Specialized on-line services
- Internet/intranet services
- Value-added network services

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Through this division, Atos offers expertise in creation and management of on-line services, integrating the full range of videotex, audiotex, fax, and Internet technologies, as well as Internet access provider (IAP) services.

As part of its international operations, Axime has developed audiotex services in Belgium, the Netherlands, Germany, and Italy.

Major customers for the Multimedia business are France Television, the French Post Office, Peugeot, Prisma Presse, and Wolters Kluwer.

Alliances

In December 1996, Axime and Microsoft entered into an agreement under which Atos will use Microsoft's Merchant Server and its Internet Security Framework for its electronic commerce service.

Atos also has a joint venture with Stratus Computer in Germany, formed in January 1996. The two partners hold equal shares in Astria, the joint subsidiary. Astria specializes in integrating automated payment systems.

Atos further has various partnership and alliance agreements with:

- Bull
- Digital
- Hewlett-Packard
- IBM
- qad
- SAP
- Tandem
- Tibco

Clients

Exhibit 8, on the following page, provides a list of some of Atos' major clients.

INPUT Assessment

According to Atos' management, one of the major reasons for the merger of Axime and Sligos was a shared strategic vision of the developments in the IT market and roles that the companies were aiming to play in that marketplace.

The companies had further assessed that there was a close strategic fit between the businesses in terms of:

- Skills, expertise, and capabilities
- Geographic coverage
- Business segments
- Clients

INPUT believes that the merger of the two companies has so far been a strong move.

Axime's key business areas were in processing services and custom software development and the company needed to strengthen its offerings in other stronger growing parts of the IT services market. Sligos' principal strength was in payment systems and the surrounding technologies; it also needed to expand its business foundation.

Through the merger, both companies have alleviated some of their weaknesses and further supported their new company by acquiring a sizable outsourcing business.

Further, the companies' operations outside France matched each other well and their management shared visions of expansion in Europe.

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Exhibit 8

Atos Group
Reference Customers

Industry Sector	Customer
Banking, Finance and Insurance	American Express Bank of France Berliner Bank BNP Citibank Compagnie Bancaire Credit Agricole Deutsche Bank Paribas Societe Generale Societes des Bourses Francaises Zurich Assurances
Transport, Travel & Tourism	Air France Air Inter Disneyland Paris Eurotunnel
Retail & Distribution	Auchan Conforama Damart
Oil & Petroleum	Elf Aquitaine Esso
Telecommunications and Media	Bayard Presse Bonnier Group France Telecom Global One Les Echos Prisma Presse Swiss Telecom Telefonica
Manufacturing	Motorola Peugeot Renault Volkswagen
Aerospace	Aerospatiale
Business Services	Blenheim Group Total
Government and Public Services	French Ministry of Education La Poste European Commission

Source: INPUT

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History shows that despite being a strong match on paper, the work of merging two companies can in reality be a long, difficult process due to issues such as culture differences. Atos seem to be going smoothly through this process owing to strong and unified management.

However, Atos still lacks strong management consultancy capabilities in its new shape. To truly take on the competition with the major players in the IT services market, the company should look to strengthen this part of its business, either through future acquisitions or alliances with appropriate consultancy companies.

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Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

May 1997

AT&T Solutions - Outsourcing

CEO and President: Victor E. Millar
1300 I Street, NW
Suite 1100
Washington, D.C. 20005
Phone: (202) 414-6800
Internet: http://www.att.com/solutions

Status:	Subsidiary
Parent:	AT&T Corporation
Employees:	11,000+ (12/96)
Total Info. Services Revenue:	$570,000,000 *
Total Outsourcing Revenue:	$400,000,000 *
Fiscal Year End:	12/31/96

** INPUT estimate*

The following profile outlines the products, services, and support offered by AT&T Solutions to its clients for outsourcing services and offers a representative sample of recent outsourcing contracts.

Company Description

AT&T Solutions was formed by AT&T in February 1995 to consolidate its capabilities in information and technology management. AT&T Solutions helps its clients add value to their organizations and to build and manage their value-adding systems and processes.

Serving more than 200 clients worldwide, AT&T Solutions targets the Global 2000—the 2,000 largest global companies within five industries. AT&T Solutions defines these industries as 1) financial services, 2) supply chain management, 3) media, entertainment, and communications, 4) utilities and energy, and 5) health management.

In 1996, AT&T Solutions achieved sales which will result in approximately $4 billion in total contract value, including large network outsourcing contracts with Textron, J.P.

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Morgan, Merrill Lynch, MasterCard, and United HealthCare.

Organization and Structure

AT&T Solutions is headed by Victor E. Millar, formerly president of Unisys Corporation's Worldwide Information Services and, prior to that, one of the founders of Andersen Consulting. Mr. Millar reports directly to John Walter, President of AT&T. AT&T Solutions is headquartered in Washington, D.C., with offices worldwide.

AT&T Solutions uses a "professional services model," working in evolving virtual teams composed of associates, managers, and client partners. The company is comprised of four practice areas:

- Consulting
- Systems Integration
- Outsourcing
- Customer Care

AT&T Solutions' four practices are supported by the following units:

- Industry Planning provides cross-industry strategic planning, information, and coordination.
- Technology Planning provides AT&T Laboratories' advanced technologies and innovations.
- Market Management provides cross-practice and cross-industry strategic marketing.
- Global Sourcing supports the firm by providing access to knowledge capital.
- Professional Practices is responsible for methodologies, professional development and training, and client satisfaction monitoring and evaluation.
- Human Resources provides a professional services infrastructure.
- Risk Management provides operational, financial, and legal assurance.

AT&T Solutions' Outsourcing Practice, headed by Rick Roscitt, Managing Partner, is headquartered in Florham Park, NJ. The current organization of the Outsourcing Practice is shown in Exhibit 1 on the following page.

Company Strategy

AT&T Solutions helps clients manage what is done today from the perspective of the future, by deploying networking strategically and flexibly. Services range from out-tasking of selected networking management functions to total outsourcing of enterprise-wide IT infrastructure.

The goal of AT&T Solutions' Outsourcing Practice is to help clients position their companies for the future using networking as a strategic transformational enabler. The Outsourcing Practice views networking as a strategic component with the power to unleash the value of assets and relationships within the enterprise and beyond. By orchestrating a flexible, extensible worldwide communications networking platform, AT&T Solutions' Outsourcing Practice believes that corporations can be more responsive to their markets, boost productivity, and out-perform their less-networked competitors.

To support the unique business and strategic objectives of each corporation, AT&T Solutions Outsourcing Practice integrates a range of networking technologies—including voice, data, video, e-mail and voice messaging—into seamless global platforms.

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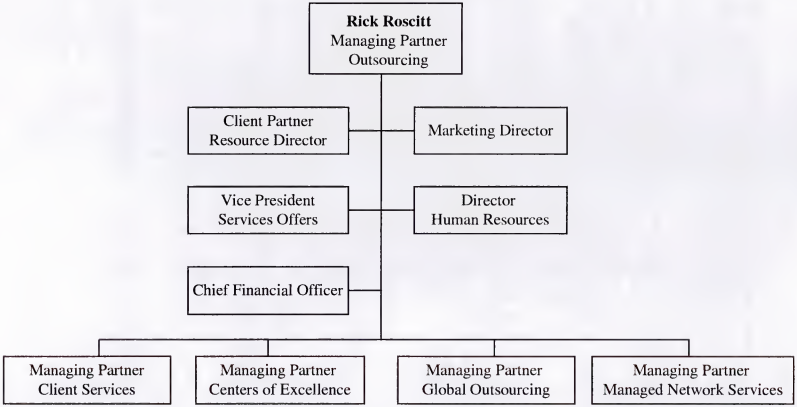
Exhibit 1

AT&T Solutions
Outsourcing Practice



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Organization and Structure

In addition to its headquarters in Washington, D.C., AT&T Solutions has U.S. offices in the metropolitan areas of Atlanta, Boston, Chicago, Dallas, Detroit, Jacksonville, Los Angeles, New Jersey, New York, and San Francisco.

International offices are located in Beijing, Gargaon, Hong Kong, Kuala Lumpur, Manila, Melbourne, Seoul, Singapore, Sydney, Tokyo, Amsterdam, Brussels, Frankfurt, Geneva, London, Madrid, Metz, Milan, Munich, Oslo, and Paris.

Financials

INPUT estimates that AT&T Solutions' worldwide information services revenue for 1996 was $570 million, and that outsourcing revenues represented approximately 70 percent of that amount, or nearly $400 million.

Markets

AT&T Solutions targets five industry groups:

- Financial services
- Supply chain management
- Media, entertainment, and communications
- Utilities and energy
- Health management

The following vertical markets have been grouped under supply chain management:

- Manufacturing and distribution
- Retail and wholesale
- Transportation and hospitality

AT&T Solutions won major contracts in the finance, health management, and supply chain management segments in 1996. Contributions, by market, to total 1995 revenue are indicated in Exhibit 2.

Exhibit 2

AT&T Solutions Revenue Distribution by Industry

Market	Percent of Total U.S. Revenue	Percent of Worldwide Revenue
Manufacturing & Distribution	29%	37%
Financial Services	23	23
Retail & Wholesale	17	16
Transportation & Hospitality/Media & Entertainment	7	6
Utilities & Energy/Health Management	12	10
Other	12	8
TOTAL	100%	100%

Source: AT&T

Geographic Markets

AT&T Solutions derives revenue from U.S. and international clients. A breakdown of 1996 revenue by geographic region is given in Exhibit 3.

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Exhibit 3

AT&T Solutions Revenue Distribution by Geography

Geographic Market	Percent of Total Revenue
U.S. and Canada	41%
Japan	23
U.K.	8
Germany	7
France	6
Other Countries	15
TOTAL	100%

Source: AT&T

Outsourcing Services

The company's services range from out-tasking of selected networking management functions to total outsourcing of enterprise-wide IT infrastructure. AT&T Solutions takes responsibility for managing and operating voice, data, and video networks, from legacy systems, desktop, and premises equipment and applications to global voice and data networks and business processes. Customers may choose end-to-end network operations outsourcing or the "out-tasking" of specific services.

Services provided by AT&T Solutions are customized according to client needs and future goals. Offerings include the following:

- IT management, which includes: network management, networked computing, and premises management
- Transaction platforms management
- Business process management, which includes: sales, lead generation, customer service, product support, account management, dealer locator, customer help desk, and relationship management

In April 1996, AT&T Solutions opened the first of its Global Client Support Centers (GCSC) in Durham (NC), which supports 200 clients worldwide. AT&T Solutions also has client support centers in Amsterdam and Singapore, and has plans to deploy a fourth center, in the U.S., in 1997.

Outsourcing Contracts

The following are highlights of major outsourcing contracts won in 1996:

J.P. Morgan

For this $2 billion-plus, seven-year contract, AT&T Solutions joined J.P. Morgan, Computer Sciences Corporation, Andersen Consulting, and Bell Atlantic Network Integration to form a strategic alliance. Called the Pinnacle Alliance and led by CSC, the consortium will manage parts of J.P. Morgan's global technology infrastructure, expanding the client's access to world-class technological resources and building its competitive strength in global finance.

The alliance will manage the firm's data centers in New York, London, and Delaware; distributed computing operations (such as desktop support and local-area networks); voice and data services in New York, London, Delaware, and Paris; and certain internal corporate applications in the U.S. and Europe. AT&T Solutions will be responsible for global network operations management.

Merrill Lynch

Under the terms of a five-year contract, with a potential value in excess of $500 million, AT&T delivers networking-enabled solutions and intelligent networking services to Merrill Lynch and its Trusted Global Advisor platform.

The agreement includes migrating Merrill Lynch's existing private line data

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infrastructure to AT&T InterSpan Frame Relay service, as well as managing inbound and outbound voice services. Lifecycle management services for Merrill Lynch's networking platform, including the LAN/WAN systems that support its retail branches, are being provided by a client-focused team in the AT&T Solutions Global Client Support Center in Durham, NC.

The contract includes call center management services, program management, and the consolidation of a variety of services currently delivered by other service providers.

MasterCard International

MasterCard International awarded AT&T Solutions a five-year, multimillion-dollar contract to design, build, and support the management of a transaction processing network that supports its worldwide financial services business. Under the agreement, AT&T Solutions implements and operates a comprehensive information technology infrastructure that supports MasterCard's data networking requirements in more than 30 countries. The contract includes the use of AT&T's WorldSource and global frame relay services. This contract, like the Merrill Lynch and J.P. Morgan contracts, is indicative of the need of financial players to develop strong electronic commerce capabilities in order to remain competitive in the finance sector.

United HealthCare

AT&T Solutions will design, build, and operate an enterprise-wide voice and data networking platform for United HealthCare, a large managed health care service provider. The network will electronically bond 30,000 users at 300 U.S. locations, including service centers, field offices, external vendor sites, and other locations across the U.S. The rapid deployment will cover more than 300 sites nationwide in approximately two months.

At United HealthCare's member services and claim centers, AT&T Solutions will also deploy advanced call center technologies to support its ongoing focus on efficiency and service. AT&T Solutions will manage United HealthCare's voice and data networking from its Global Client Support Center.

Textron

AT&T Solutions will help Textron achieve its growth goals by enabling the seamless integration of future mergers and acquisitions. For this $1.1 billion, 10-year contract, AT&T will upgrade, expand, and manage Textron's global communications infrastructure that serves the company's 25 divisions worldwide. AT&T Solutions is engineering, designing, and implementing a comprehensive networking platform encompassing Textron's voice, data, and video requirements worldwide, including local exchange services, wide-area networking, Virtual Telecom Network Services (VTNS), electronic mail, and LAN management.

Clients

AT&T Solutions has a customer base of more than 200 clients. Key 1996 outsourcing contracts are profiled in Exhibit 4.

Competition

AT&T Solutions' outsourcing competitors include the following:

- EDS
- MCI Systemhouse
- IBM Global Services
- Computer Sciences Corporation
- Andersen Consulting

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Exhibit 4

Representative 1996 AT&T Solutions Outsourcing Contracts

AT&T Solutions Client	Industry	Award ($M)	Outsourcing Type	Duration (Years)
MasterCard International	Finance	NA	Network Operations	5
McDermott International, Inc.	Discrete Manufacturing	24	Network Operations	5
Merrill Lynch	Finance	500	Network Operations	5
Textron	Discrete Manufacturing	1100	Network Operations	10
United HealthCare	Health Care	750	Network Operations	10

Source: INPUT's Outsourcing Contracts Database

Assessment

AT&T Solutions' strengths include:

- Advanced network technology and expertise
- Global infrastructure
- Electronic commerce initiatives
- Worldwide presence
- AT&T brand and name recognition worldwide

AT&T is successfully gaining share in the network operations outsourcing market. The company is forming alliances where necessary, as in the Pinnacle alliance for J.P. Morgan. It is positioning itself to provide global electronic commerce capabilities, which should fuel future growth.

Challenges over the coming year include:

- Access to qualified professionals to meet outsourcing market demands
- Expansion of client services beyond network operations outsourcing to include more applications management and higher-value business operations outsourcing services
- Heightened competition from alliances and large communications companies with IT capabilities, such as the proposed British Telecom-MCI goliath
- Flexible adaptation to meet changing technology and market demands
- Acquisition of additional applications and business process management expertise to supplement network-related capabilities

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IT 2000

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Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

July 1995

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AT&T Global Information Solutions

Chairman & CEO: Lars Nyberg
1700 South Patterson Boulevard
Dayton, OH 45479
Phone: (513) 445-5000

Status:	Operating Group
Parent:	AT&T
Total Employees:	46,250 (3/95)
Revenue:	$8.46 billion
Fiscal Year End:	12/31/94

Key Points

- The goal of AT&T Global Information Solutions (AT&T GIS) is to provide Customer Focused Solutions that help businesses better understand and serve their customers by more effectively getting, moving and using customer information.
- In May 1995, AT&T named Lars Nyberg as chairman and CEO of AT&T GIS. Mr. Nyberg was formerly chairman and CEO of the Communications Systems division of Philips Electronics NV.
- For 1994, AT&T GIS posted revenues of $8.46 billion, a 16% increase over 1993 revenue of $7.26 billion. Strong gains were posted in Professional Services (up 33%), PC systems (up 100%) and Commercial Massive Parallel Processors (up 50%).
- AT&T GIS generated worldwide services revenue of $2.8 billion in 1994 and forecasts revenues of $3.7 billion by 1997. Professional services and systems integration currently contribute $600 million to this figure.

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- In 1994, AT&T GIS targeted six key industry segments for its products and services—financial services, retail, communications, consumer goods manufacturing, transportation and the public sector.

- During 1994, as part of its strategy to become a leader in the Customer Information Solutions market, AT&T GIS launched sales and marketing solutions for the retail, financial, communications and consumer goods manufacturing industries.

- During 1994, AT&T GIS sold off several nonstrategic businesses, including ADDS Terminals, Microelectronics and the Ithaca Printer Division.

Company Description

AT&T GIS provides a range of computer systems and products; associated maintenance/support; consulting, engineering, integration and implementation professional services to clients worldwide.

AT&T GIS' current operations include a substantially enhanced professional services business, the former operations of NCR Corporation (acquired in 1991), certain computer business of AT&T Computer Systems and the parallel processing systems business of Teradata (acquired in 1992).

The AT&T GIS name was adopted in 1994 to reflect the company's new orientation and global capabilities in computing and communications.

Organization and Structure

AT&T GIS operates as one of five major groups within AT&T. The four other AT&T groups include the following:

- *The Communication Services Group* provides global long distance services for business and residential customers. It installs and manages AT&T global networks and customers' private networks.

- *The Network Systems Group* provides network software, equipment and systems integration for telephone companies, governments, private network operators, cable television operators and wireless service providers. This group also provides photonics components and power supplies for AT&T and other high-technology companies.

- *The Multimedia Products and Services Group* provides products to support the conversions and communications, computing and information and entertainment for consumer's businesses and government entities around the world.

- *AT&T Solutions* was formed in early 1995 as a new business unit in an attempt to harness and leverage all of AT&T's capabilities in information and technology management to provide large corporations with a single source for network-centered solutions.

Customer Focused Business Model

The Customer Focused Team is the building block of AT&T GIS, providing a flattened organization that drives decision-making closer to the customer.

- The Customer Focused Team is a cross-functional unit dedicated in selected industries to understanding customer needs and interests and working to deliver solutions fitting their unique organizational structure.

- Each team is headed by a team leader and includes representatives of services, sales, marketing, products and systems and support organized around six targeted

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vertical industries (retail, financial services, transportation, consumer goods manufacturing, communications and the public sector).

- AT&T GIS emphasizes the inclusion of personnel from service and support functions on an equal footing with traditional hardware sales staff as an indicator of the key role of services in its total offering.

- Some 570 Customer Focused Teams are deployed worldwide. Teams have "full power, permission, and protection to do whatever is necessary to delight customers." To add to the theme of empowerment, senior staff are referred to as "coaches."

AT&T GIS' current organization structure is shown in Exhibit A. The company's primary operating units are as follows:

- *Worldwide Marketing*
- *Worldwide Products and Systems*
- *Field Operations (The Americas)*
- *Field Operations (Europe & Middle East/Africa)*
- *Field Operations (Asia/Pacific)*
- *Worldwide Services*
- *Systemedia*

Worldwide Marketing's role is to establish AT&T GIS' market position, determine key target markets and strategies, determine sales resources and prioritize programs.

Products and Systems' role is to realize and deliver products and programs, technical support for marketing and sales initiatives, worldwide distribution, manage R&D, product and distribution costs relative to full-stream profit statements.

There are four basic product lines of business (workstations, computer systems, financial and retail systems) and two fully integrated lines of business (*Information Products* and *Materials and Logistics Management*).

Field Operations' role is Customer Focused Team development and support, product and solution sales, service and support; execution of global marketing programs; and the development and execution of local marketing programs.

Field Operations is divided into three groups—The Americas, Europe & Middle East/Africa and Asia/Pacific.

Worldwide Services' role is to develop offerings in Professional Services and Customer Support Services. Once a new service is "productised" it is passed over to Field Operations to sell and implement. This unit's organization is shown in Exhibit B.

In this arrangement AT&T GIS is giving services their own "factory" with equal status with those of Products and Systems.

Systemedia focuses on the transaction media business, with core competencies in bar code systems, label and label form solutions, mailer design, thermal printing technology, MICR technology, inking media and electronic forms automation.

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Exhibit A

AT&T Global Information Solutions

Team Roster

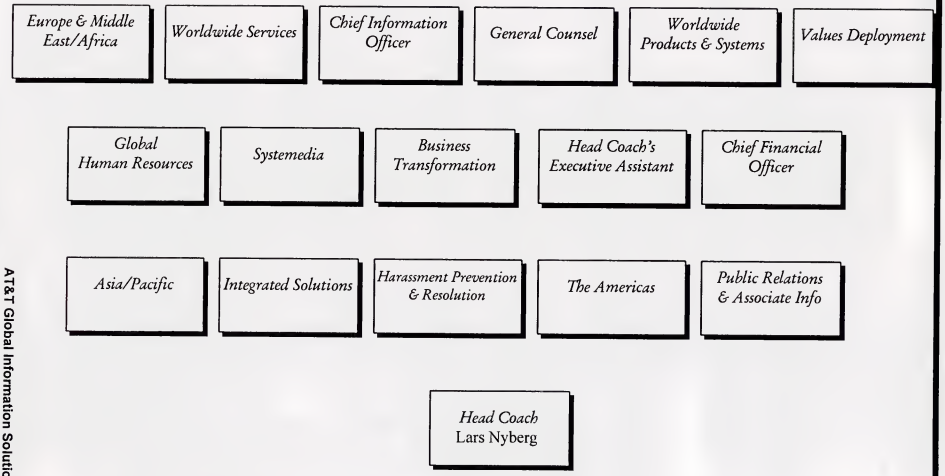

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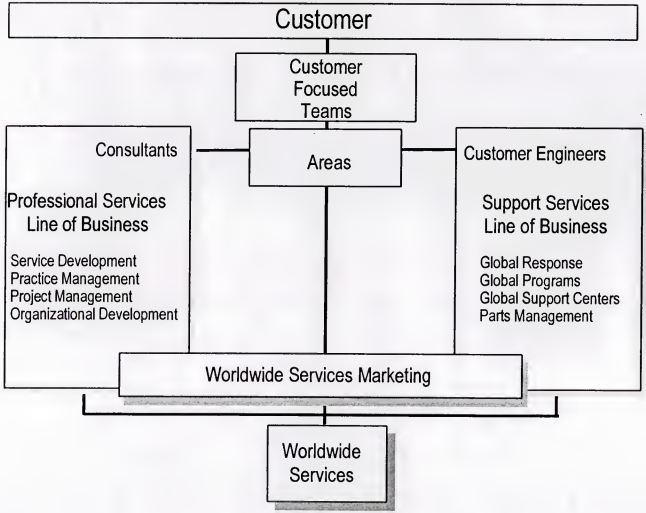
Exhibit B

AT&T GIS Worldwide Services Organization Structure



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AT&T GIS' key executives are shown below:

AT&T GIS Key Executives

Name	Position
Lars Nyberg	Chairman and CEO
William T. O'Shea	Senior VP Worldwide Marketing
Bob Carpenter	SVP Worldwide Services
Mike Ruffolo	VP Worldwide Services Marketing
Tom Mays	SVP Worldwide Products and Systems
Tony Fano	SVP Europe and Middle/East Africa
Hidea Takahashi	VP Asia
John Giering	SVP, Chief Financial Officer

Source: AT&T

Company Strategy

AT&T GIS' mission is to help its customers help their customers to more effectively get, move and use information by combining the expertise of AT&T GIS in the following areas:

- **Get it**—Helping businesses understand the buying patterns, preferences and service requirements of customers and prospects by gathering information at the point-of-contact through devices and systems used in customer transactions, such as point-of-sale terminals, automated teller machines, telephones, smart-card readers, personal computers and handheld devices.

- **Move it**—Transporting that information between locations and individuals via global voice, data and visual communications services and computer networking products.

- **Use it**—Analyzing the information to support decisions on how the organization seeks to serve its customers. This takes place through parallel-processing systems, distributed client/server computers and services such as database design and systems integration.

The mission of AT&T GIS Worldwide Services is to "improve customers' business performance through identifying, enhancing and leveraging people, processes, information and technology." Key global services strategies include:

- Delivering a full range of services that focus on providing robust solutions within AT&T GIS' six targeted industries

- Leveraging alliance partners to complement AT&T GIS' core service competencies

- Continuing to make major investments in the services business and delivery infrastructures

- Leveraging cross AT&T service capabilities to deliver integrated customer solutions.

AT&T GIS' Professional Services revenue is currently at approximately $600 million worldwide, with the goal of reached $1 billion by 1997. Professional Services' guiding principals for AT&T GIS include:

- Building strategic relations with customers by providing thought leadership for business and technology solutions

- Contributing essential knowledge and skills to success of Customer-Focused Teams

- Nurturing values-based partnerships that extend AT&T GIS' capabilities to benefit its customers

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- Contributing growth and profits to AT&T GIS

Four roles that build on the strengths within Professional Services include:

- Account Consultants are integral members of Customer-Focused Teams who identify technology, consulting and program management resources required to provide comprehensive services and solutions.

- Consulting services, which include broader capabilities in business process consulting and systems planning and design that round out the front-end of the company's service offerings.

- Technology services, which include product-specific implementation services

- Program/project management, which provides the "glue" for managing and assuring service delivery for large systems integration opportunities on time.

AT&T GIS actively supports AT&T's five key technological initiatives—Visual Communications, Wireless Communications, Networked Computing, Voice and Audio Processing and Messaging.

AT&T GIS also supports AT&T Solutions, an organization established by AT&T during 1994 to complement the efforts of AT&T's existing business units and to create new integration capabilities.

Financials

AT&T GIS' 1994 revenue reached $8.46 billion, a 16% increase over 1993 revenue of $7.26 billion.

- Gross margins remained under pressure because of competitive price pressures on all products, the erosion of high-margin maintenance services, and a less favorable product mix (a higher portion of lower margin PC sales)

- Excluding restructuring charges of $219 million for 1993, operating income improved slightly during 1994 to just above break-even.

- A five-year financial summary is shown on the following page.

AT&T GIS management attributed 1994 results to the following:

- The Professional Services business generated close to $600 million in worldwide revenue, a 33% increase over 1993 levels. The growth was the result of implementing the key services strategies previously discussed.

- The Scalable Server business capitalized on strong growth in the UNIX and NT Server marketplace. The Open Systems Server business (3400/3500/3600 systems) collectively grew 29%.

- PC system sales doubled during 1994, approaching the $2 billion mark.

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AT&T Global Information Solutions
Five-Year Financial Summary
($ Millions)

Item	Fiscal Year 1994	1993	1992	1991	1990
Revenue	$8,459	$7,262	$7,135	$6,300	$6,285
• Percent change from previous year	16%	2%	13%	--	6%
Operating income (loss)	$2.0	$(218.2) (a)	$288.8	$230.0	$653.0
• Percent change from previous year	--	(176%)	26%	(65%)	(6%)

(a) Includes restructuring charges of $219 million.

- In the Commercial MPP systems market, revenues increased by 50% to $450 million. Sales were strong in the Pacific Rim, particularly in Japan where 104 systems were sold. AT&T GIS also received significant Commercial MPP orders from Reuters PLC (U.K.), Casino (France), Sony (Japan), Tokyo Bank, Kirin Systems (Korea), Quantis (Australia), American Airlines, BellSouth, the IRS and Kohls Department.

- The ATM and Self Service terminal business experienced an 11% increase in revenue to $863 million. GIS claims a leadership position of approximately 40% of worldwide ATM shipments, exporting to 102 countries.

Research and development expenditures for AT&T GIS were approximately $500 million (5.9% of revenue) in 1994, $568 million (7.8% of revenue) in 1993 and $283 million (4.0% of revenue) in 1992.

Revenue by Product/Service

A three-year summary of source of worldwide revenue, as provided by AT&T GIS, is shown on the following page.

AT&T GIS' $2.8 billion in worldwide services revenue for 1994 was segmented approximately as follows:

Support services	69%
Professional services/ systems integration	21%
Implementation services	8%
IT management	2%
	100%

INPUT estimates AT&T GIS had approximately $520 million in U.S. information services revenue for 1994, segmented as follows ($ Millions):

Professional services	$150
Systems integration	170
Software products	200
	$520

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AT&T Global Information Solutions
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	1994		1993		1992	
Product/Service	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Computer products and systems	$4,188	50%	$3,447	48%	$3,317	47%
Computer services and rentals	2,818	33%	2,644	36%	2,661	37%
Microelectronics and Systemedia	932	11%	787	11%	745	10%
Sales to AT&T affiliates	521	6%	384	5%	412	6%
Total	$8,459	100%	$7,262	100%	$7,135	100%

Market Financials

AT&T GIS' $2.8 billion in worldwide services revenue for 1994 was derived approximately as follows:

Financial services	39%
Retail	20%
Public sector	9%
Telecommunications	8%
Manufacturing	5%
Transportation	3%
Other	16%
	100%

AT&T GIS has targeted six key industries:

- In the retail market, target opportunities include retail store automation, high-performance merchandising and remote store management.
- In the financial services market, target opportunities include financial delivery systems, financial services (business critical computing), relationship management and Japan retail delivery.
- In the communications market, target opportunities include customer information management and customer engagements.
- In the consumer goods manufacturing market, target opportunities include agile manufacturing and relationship manufacturing.
- In the transportation market, target opportunities include marketing/distribution systems.
- In the public sector market, target opportunities include compliance-related systems.

Geographic Markets

Approximately 51% of AT&T GIS' total 1994 revenue was derived from the U.S. and 49% from international sources.

A three-year summary of geographic sources of revenue is shown on the following page.

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AT&T GIS
Three-Year Source of Revenue Summary
($ Billions)

	Fiscal Year					
	1994		1993		1992	
Geographic Market	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
U.S.	$4.3	51%	$3.7	51%	$3.4	48%
International	4.2	49%	3.6	49%	3.7	52
Total	$8.5	100%	$7.3	100%	$7.1	100%

Approximately $1.1 billion of AT&T GIS' $2.8 billion in worldwide customer support services revenue was derived from the U.S. and $1.7 billion from international sources.

INPUT estimates approximately 53% of AT&T GIS' $600 million in professional services and systems integration revenue was derived from the U.S. and 47% from international sources.

Employees

AT&T GIS has approximately 46,250 employees worldwide, including 24,300 in the U.S.

AT&T GIS' Worldwide Services organization has approximately 18,500 employees, segmented as follows:

Customer Support Services

Americas
- Customer engineers 3,800
- Service sales consultants 100

International
- Customer engineers 8,860
- Global support systems engineers 1,040

13,800

Professional Services

Americas*—Consultants..... 1,200
International—Consultants..... 3,500
4,700

* *Includes the U.S., Canada, Mexico, and Latin America*

Customer support services personnel are in more than 210 locations throughout the Americas and in 135 countries worldwide.

Professional services personnel are in more than 200 locations throughout the Americas and in 135 countries worldwide.

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Key Services

AT&T GIS' full continuum of services are provided through the Worldwide Services organization.

- AT&T GIS provides Customer-Focused Solutions to support its customers with timely, accurate decision making data and the knowledge to use it effectively to drive business results.

- Customer Support Services offers implementation and life cycle management of hardware, network, software applications and operating systems.

- Professional Services offers front-end business and technology consulting which addresses and solves industry-specific issues as well as services to assist during solutions deployment and delivery.

- AT&T GIS' services are summarized in Exhibits C and D.

AT&T GIS' core service competencies are as follows:

- *Customer Information Services*—AT&T provides decision-based solutions to better manage the direct link between clients and their customers. AT&T GIS provides the global infrastructure to design, implement and maintain the environment.

- *Network Computing*—AT&T GIS has experience with data, voice, imaging and video networking.

- *Global Distributed Open Solutions*—AT&T GIS has more than 10 years experience in integrating, implementing and supporting open systems and can integrate and maintain disparate (multivendor) systems and mission critical proprietary systems into a coherent, productive environment. Includes client/server migration, consulting and project management expertise.

- *Business Critical Environments*—AT&T GIS provides the technical expertise, global infrastructure, tools and methodologies to provide a premium level of service within business critical and mission critical environments in its targeted industries.

- *Massively parallel systems*—Database design and implementation

AT&T GIS Consulting and Network Service Solutions offers clients support in the following areas:

- *Total Customer Management*—Contains all the services that are required to guide a client through a change process to help them be more focused on their customers, combining customer relationship consulting, customer satisfaction research, customer information consulting, human interface services and integrated business renewal.

- *Information and Technology Directions*—A consulting solution enabling a client to create their information and technology plans to support the realization of their enterprise business strategy.

- *Network Computing Services*—Set of professional, support and management services to address issues concerning networking technology and its effects on the business.

- *GlobalPM*™—AT&T GIS' Project Management service methodology.

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Exhibit C

AT&T GIS Customer Focused Service Solutions

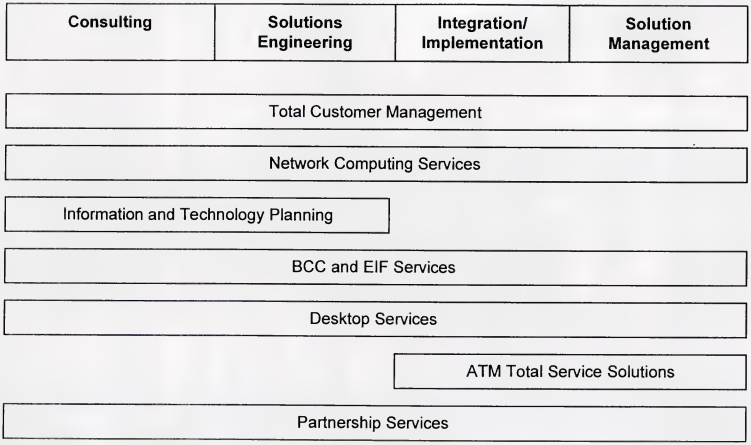

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Exhibit D

AT&T GIS Service Offerings

Consulting	Solutions Engineering	Integration/ Implementation	Solution Management
• Business Reengineering • Org. Change Mgmt. • Customer Insight Consulting • Information Consulting • Enterprise Arch. Planning • Technology Consulting • Network Consulting • Human Interface Consulting	• Network Planning and Design • Tech. Solution Design • Application Development • Database Engineering	• Migration Planning • Network Integration • Systems Integration • Installation	• Tiered System Support • Help Desk • Software Support • Hardware Support • Multivendor Services Mgmt. • Self Maintenance • Network Mgmt.

Global Project Management

Education

- *Organization Change Management*— Research-based methodology providing a structured and customized approach to implementing strategic and tactical change initiatives

AT&T GIS offers several programs geared toward providing Customer Focused Solutions to its customers, including the Enterprise Information Factory™ and Business Critical Computing.

The Enterprise Information Factory supports decision making as well as action by integrating data from informational systems and operational systems into a single logical database management system.

- It builds upon the detail customer data established in the data warehouse to provide a single logical data model for informational and operational applications, giving organizations the ability to turn decisions into actions, better responding to customer needs and implementing new processes in support of horizontal re-engineering efforts.

- Enterprise Information Factory services have been developed to assist with all phases of a solution. Services phases include Needs Assessment, Solution Identification, Solution Impact, Solution Implementation and Solution Support and Maintenance.

- At the operational level, AT&T GIS offers core enabling products and services including:

  - AT&T's TOP END application management middleware product, which allows thousands of information requests to be handled on a response-time-sensitive basis across a corporate enterprise.

  - AT&T OneVision Network Management Solutions, a means of giving businesses a single point for monitoring and managing the widely disparate networking components deployed throughout their enterprises. OneVision facilitates deployment of the Enterprise Information Factory by providing a framework that helps consolidate information from multiple applications.

  - AT&T Enterprise Messaging, a business environment uniting electronic mail, electronic data interchange, voice messaging, workflow, query-by-mail and wireless elements.

- This integration of services into a whole product program benefits AT&T GIS and clients by assisting the Customer Focused Teams to deliver a solution that meets customer expectations.

Business Critical Computing (BCC) is a Solution Environment, consisting of services, technology and alliances. The objective of BCC is to provide a foundation (environment) for AT&T GIS' industry solutions and an IT re-engineering Solution Environment to enable the move from legacy computers to open, distributed computing.

- BCC is an industry focused and services led program that begins with understanding the customer's "business critical" processes and ends with the implementation of Customer Focused Solutions.

- BCC offers a portfolio of IT re-engineering approaches, including new client/server development, new packaged application integration, legacy application migration and integration of existing application and data assets.

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Customer Focused Solutions' project examples include the following:

- Providing an integrated customer information system for 800-FLOWERS to improve customer service

- Developing a solution to capture and consolidate point-of-sale data for Wal-Mart's 2,000 retail locations. and develop a customer database. The data provides sales information on the products of approximately 3,400 Wal-Mart suppliers, allowing them to track buying trends by store and ship products when needed, resulting in reduced inventory costs.

- Assisting U S WEST Communications to consolidate (on a daily basis) customer and other information from seven data centers onto a backbone network for marketing, analysis and forecasting.

- Supplying the networking and information system for Choice Hotels in support of its central reservations system and property management functions.

- Supplying an information system to combine client information from eight government agencies into a single database and perform data analysis for the Australian Department of Social Services related to social security entitlements.

- Working with System One (the reservations services subsidiary of Continental Air Lines) to facilitate education, training and market analysis of System One travel services and plan streamlining and re-engineering of customer service, sales and product management processes, including providing hardware products and maintenance, software support, warehousing, integration and installation.

- Providing workshops, business case studies, re-engineering, integration consulting, networking consulting, database consulting, rapid application development, project management and a massively parallel system to U.K.-based retailer W.H. Smith to improve information flow.

- Providing solution engineering and solution integration for Kmart related to product sales tracking.

- Providing a full solution to Banc One for credit card authorizations.

- Providing networked store automation solution for SuperAmerica.

- Providing network consulting for National Westminster Bank.

AT&T GIS also offers a range of IT project management, consulting and associated services. Contract examples include the following:

- Working with other subcontracts to build a LAN Administration Control Center in Houston to support Continental Airlines' operations throughout the U.S.

- Network design, planning and integration services for Bank of America.

- Business process reengineering and related consulting for Bank of Boston's deposit account management functions.

- Developing and integrating a reengineered retail lockbox system for First Union Bank.

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- Providing consulting, application development and implementation services for Ameritech's Civic Link Services.
- Providing systems analysis and logical data modeling to the Suffolk County Department of Civil Service.
- Providing network design and implementation services to Oklahoma Gas & Electric

Key Products

AT&T GIS offers the following hardware products:

- AT&T 3600 enterprise servers (massive parallel processors)
- AT&T 3500 enterprise services
- AT&T 3400 enterprise/departmental servers
- AT&T Notebook computers
- AT&T Globalyst personal computers
- NCR 3325 and NCR 3350 microcomputers

AT&T GIS also specializes in industry-specific equipment for the financial services and retail industries, including automated teller machines (ATMs), teller workstations, retail terminals and scanners.

AT&T GIS' Cooperative Computing Software provides an integrating environment for the company's Open Cooperative Computing Architecture. Products are grouped into four major categories:

- *Information Access Services*—to give users access to other systems in the enterprise
- *User Services*—to integrate the user with the information processing system to improve productivity and effectiveness
- *Application Services*—to allow developers to integrate existing applications and produce new, low-cost cooperative computing applications rapidly
- *Network Services*—to provide a number of local-area network and wide-area network options.

Clients

AT&T GIS has supplied Customer Focused Solutions and associated services to clients worldwide.

A sample of Customer Focused Solutions clients are summarized in Exhibit D.

Other clients (by industry) include:

Financial Services—Bank of Boston, CoBank, European American Bank, First Union Bank, Huntington Bank, Industrial Savings and Loan Association, Mercantile Bank, Mutual of Omaha, S.W.I.F.T., Title Guaranty Escrow Services.

Public Sector—Canada Post Corporation, Jackson County, Ministry of Human Resources Development and Citizenship & Immigration Department, New York State Liquor Authority, State of New Mexico Taxation and Revenue, State of Texas Department of Public Safety.

Retail—Applebee's, Caldor, Canadian Tire Corporation, Fabri-Center of America, Groosman's, JC Penney (Chile), Lechmere, Merck, National Convenience Stores, Reebok International, Southland Corporation, SuperAmerica, Thrifty Foods, Zellers.

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AT&T GIS Customer Focused Solutions Client List

Retail	Transportation	Telecommunications	Financial/Banking Insurance
Kmart	American Airlines Cargo	AT&T	ASB Bank Limited
Wal-Mart	Arket Reizen	Sprint	Banc One
Caldors	British Airways	U S WEST	Bank of America
800-FLOWERS	Canadian Airlines	Telecom Australia	Chase Manhattan
Helene Curtis	CONRAIL		Community Mutual
W.H. Smith	Delta Air Lines		Citibank
JC Penney	Lufthansa		First of America Bank Corporation
Sears	SNCF		The Capital Group
Grossman's	System One		Dime Savings Bank of New York
	Union Pacific Railroad		INVESCO Funds
			National Westminister
			TSB Bank
			Western Bank
			Reuters
			Fidelity Insurance
			Blue Cross Blue Shield of Illinois

Communications—Ameritech, BC Tel, BellSouth Advertising and Publishing Company, GTE Telephone Operations, Telecom New Zealand, U S WEST Communications.

Manufacturing—Anheuser-Busch, Chrysler, Coca-Cola, Hughes Aircraft, McDonald's, Oklahoma Gas and Electric, Pepsi-Cola, Proctor & Gamble, Star Enterprises, State Electric Supply, Whirlpool.

Marketing and Sales

AT&T GIS is marketing solutions oriented products and services by:

- Focusing on six industries (retail, financial services, communications, transportation, manufacturing (consumer goods) and public sector
- Emphasizing high level global marketing programs built around customer information solutions
- Increasing investment in services, alliances, marketing communications and infrastructure marketing

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In late 1994, AT&T GIS announced sales and marketing solutions in four of its targeted markets—retail (*High Performance Merchandising*), financial services (*Relationship Banking*), communications (*Marketing Management* System) and consumer goods manufacturing (*Relationship Manufacturing*).

- Although these solutions were previously available on a custom basis, they have now been "productized" and are more readily available.

- Using the Enterprise Information Facility services and the vertical market solutions described above, AT&T GIS' Customer Focused Teams can better evaluate and access their customers' needs.

Alliances

In March 1995, AT&T GIS and SHL Systemhouse signed a technology partnership agreement whereby AT&T GIS will use the SHL TRANSFORM performance support software environment as an integrated desktop for its services professionals and resell SHL TRANSFORM to its customers.

In August 1994, AT&T GIS and Delta Air Lines announced the formation of a joint venture to provide information technology services to Delta Air Lines.

- The joint venture manages all of Delta's computing and communications requirements, with the exception of the airline's reservation and related systems. Responsibility for the reservation system has been transferred to WORLDSPAN, a joint venture Delta, Northwest, TWA and ABACUS.

- Delta and AT&T share equal ownership of the venture, which is based in Atlanta and employs approximately 1,200 people. AT&T GIS is also establishing a new education facility in Atlanta to train the information technology staff on new technologies and provide continuing education opportunities.

- In addition to providing information technology services to Delta, the joint venture markets and sells computing and communications solutions to other companies in the travel and transportation industries, excluding airline and travel agency computer reservation systems.

- Under the terms of the agreement, Delta will buy an estimated $2.8 million in technology products and services from the joint venture.

- The venture is significant because it represents a major win in the growing market for outsourcing and professional services.

Currently, AT&T GIS has more than 1,100 partners worldwide, including the following:

- *Technology enablers*—Intel, Microsoft

- *Manufacturing*—Conner Disk Drives, Samsung, Intel

- *Consulting*—Andersen Consulting, Coopers & Lybrand, EDS, Perot Systems, SHL Systemhouse

- *Software/Applications*—Computer Associates, Informix, IRI Software, Oracle, Policy Management Systems Corporation, SAP, Sybase

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- *Distribution and Servicing*—CompuCom, Entex, Inacom, Intelligent Electronics, MicroAge, Osborne

Competitors

AT&T GIS' major competitors for professional services include IBM ISSC, Unisys, DEC and the Big 6

INPUT Assessment

AT&T GIS has maintained a low-key image but is now changing and attempting to promote its service capabilities. In today's IT market, this change is essential. AT&T GIS needs to double its Professional Services business in order to compete with companies such as IBM ISSC and Unisys.

The integration of AT&T GIS does not yet appear complete, yet this has huge potential rewards in the fast-growing networking market.

The new strategy is strong and we must now wait for the implementation.

Parent Company

AT&T
32 Avenue of the Americas
New York, NY 10012-2412
Phone: (212) 387-5400

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INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

July 1996

Autodesk, Inc.

Chairman,
President & CEO: **Carol A. Bartz**
111 McInnis Parkway
San Rafael, CA 94903
Phone: **(415) 507-5000**
Fax: **(415) 507-5100**
Internet: **http://www.autodesk.com**

Autodesk

Status:	Public
Employees:	1,958 (5/96)
Revenue:	$546,884,000
Fiscal Year End:	1/31/96

Key Points

- Autodesk is the world's leading supplier of design automation software and a leading provider of multimedia software with more than three million customers worldwide. The company believes that its principal software products—AutoCAD®, AutoCAD® LT, AutoSketch®, AutoCAD® Designer, Mechanical Desktop, and 3D Studio® MAX —are the world's most widely used general-purpose computer-aided design (CAD) software products.
- AutoCAD Release 13, with its rearchitected core technology, began shipping in late November 1994.
- The final AutoCAD Release 13 platform, for Windows 95 and Windows NT, is significantly faster than earlier versions and includes new features such as real-time Pan and Zoom.
- In May 1996, Autodesk expanded is offerings to the interior design market with the acquisition of Creative Imaging Technologies, a software and digital imaging company.
- In April 1996, Autodesk began shipping 3D Studio MAX, the company's next-generation multimedia product.

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All brand names and product names are acknowledged to be trademarks or registered trademarks of their owners.

- In April 1996, Autodesk introduced two Internet products—WHIP!™ Plug-in, a 2D browser, and HyperWire™, an authoring tool for the World Wide Web.

- In early 1996, Autodesk shipped Autodesk Mechanical Desktop for mechanical design.

- Autodesk's European sales led the company's growth, with an increase of 33%.

Company Description

Autodesk provides PC- and UNIX-based design software and PC multimedia tools. The company has three million customers in nearly 130 countries.

- The company's 2D and 3D products, geographic information systems, and data management tools are used in many industries for mapping, architectural design, mechanical design, film and video production, video/game development, and Web content development.

- Autodesk's principal product—AutoCAD—has an installed base approaching 1.5 million seats worldwide.

- Its Kinetix division provides PC-based 3D modeling and animation software, providing a range of products for digital media and design professionals.

- Autodesk products are sold through Autodesk Systems Centers, Dealers, and Distributors worldwide.

Operations and Structure

Autodesk is currently organized into the following groups:

- Product Development focuses on developing specific software products and core tools, such as graphical engines and visualization technologies.

- Marketing has realigned its internal marketing organization around five key market groups that closely match its customer base. Each of these groups is chartered with bringing customer-specific products to market.

  - The Architecture, Engineering and Construction/Facilities Management (AEC/FM) Market Group addresses Autodesk's traditional architectural, engineering, construction, and facilities management markets.

  - The Mechanical Computer-Aided Design (MCAD) Market Group offers products that use 3D, free-form surfacing technology for mechanical design and manufacturing applications in various industries, including the automotive and consumer products sectors.

  - The Geographical Information Systems (GIS) Market Group targets municipalities, utility companies, and agricultural or environmental organizations. The group is addressing how automated mapping/facilities management, GIS, and CAD users can share mapping, GIS, and associated information in a corporate environment.

  - The Data Management (DM) Market Group develops and markets products that allow users to organize, access, share, view, and revise design-related information.

  - The Kinetix division (formerly the Multimedia Market Group) offers 3D content-creation software focused on film, video, interactive games, and design visualization.

- Autodesk Data Publishing, through partnerships with various manufacturing

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companies, markets CD ROM-based libraries of intelligent, preformatted graphic and nongraphic data that can be shared and reused.

- The Advanced Products Group focuses on providing a new generation of tools for a much broader market. The goal of this group is to add to Autodesk's traditional design-automation customer base—architects and engineers—by creating products for individuals in associated trades, such as landscaping and interior design.

- Autodesk is organized geographically into three sales regions—the Americas, Europe, and Asia/Pacific.

U.S. offices are in Alameda, Encinitas, and San Rafael (CA); Atlanta (GA); Bothell (WA); Chicago (IL); Cincinnati (OH); Dallas (TX); Florham Park (NJ); Londonderry (NH); Milwaukee (WI); Novi (MI); Reston (VA); and Tulatin (OR).

Foreign subsidiary/office locations are as follows:

- *Americas*—Brazil, Canada, Chile, Colombia, Mexico, and Venezuela

- *Europe*—Austria, Belgium, Czech Republic, France, Germany, Hungary, Israel, Italy, Netherlands, Poland, Portugal, Russia, South Africa, Spain, Sweden, Switzerland, the U.K., and the United Arab Emirates

- *Asia/Pacific*—Australia, China, Hong Kong, India, Indonesia, Japan, Malaysia, Singapore, South Korea, and Taiwan

Company Strategy

Autodesk's long-term strategy is to create an interoperable family of design automation software products to address the entire product development process—from rough concept to final production and maintenance.

- The strategy takes advantage of Autodesk's core technologies and open systems approach to its four primary target markets—AEC; mechanical design and manufacturing; mapping, geographical information systems (GIS); and visualization.

- Autodesk has established a second major area of activity—Advanced Products—to provide a development environment to create new products that complement design automation and support new market opportunities.

Autodesk's strategy also includes maintaining an open architecture on its products to facilitate third-party development of peripheral and complementary products.

Autodesk is constantly enhancing its distribution and marketing efforts to position itself for future growth. This includes expansion and strengthening of the company's retail channels, enhanced direct marketing and technology licensing programs, and establishing of new subsidiary offices worldwide.

Financials

Fiscal 1996 revenue reached $546.9 million, an 18% increase over fiscal 1995 revenue of $465.3 million. Net income increased 55%, from $56.6 million in fiscal 1995 to $87.8 million in fiscal 1996.

A five-year financial summary is shown on the following page:

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Autodesk, Inc.
Five-Year Financial Summary
($ Millions, except per share data)

Item	Fiscal Year 1/96	1/95	1/94	1/93	1/92
Net revenue	$546.9	$465.3	$418.7	$367.7	$284.9
• Percent change from previous year	18%	11%	14%	29%	20%
Income before taxes	$138.3	$89.1	$96.8	$69.8	$92.3
• Percent change from previous year	55%	(a) (8%)	39%	(24%)	--
Net income	$87.8	$56.6	$62.2	$43.9	$57.8
• Percent change from previous year	55%	(9%)	42%	(24%)	2%
Earnings per share (b)	$1.76	$1.14	$1.25	$0.88	$1.15
• Percent change from previous year	54%	(9%)	42%	(24%)	--

(a) Includes a one-time litigation charge of $25.5 million.

(b) Restated to reflect a two-for-one stock split in October 1994.

Fiscal 1995 results include a one-time charge of approximately $25.5 million related to a judgment in a trade-secrets lawsuit. Excluding that charge, net income for fiscal 1995 would have been $73.1 million ($1.47 per share) and fiscal 1996 net income actually increased 20% over fiscal 1995.

Autodesk management attributes revenue growth in fiscal 1996 to higher sales of AutoCAD Software, as well as increased sales of multimedia, data management, and low-end CAD product offerings, most notably AutoCAD® LT.

- Revenues from AutoCAD and AutoCAD updates increased from the prior year to approximately $435 million, up from $365 million in fiscal 1995 and $345 million in fiscal 1994. Worldwide demand for AutoCAD remained strong, resulting in the sale of 233,000 new licenses in fiscal 1996, compared to 203,000 in fiscal 1995. Fiscal 1996 AutoCAD update revenue resulted principally from sales of the most current AutoCAD version, AutoCAD Release 13, which was released in the fourth quarter of fiscal 1995. AutoCAD upgrade revenue increased 17% over fiscal 1995 to approximately $49 million.

- Revenue from non-AutoCAD products remained at approximately 20% of total revenue during fiscal 1996.

Net income was 16% of revenue in fiscal 1996, compared to 12% of revenue in fiscal 1995. Marketing and sales expenses were 34% of revenue for both years. General, administrative, and research and development expenses were 14% of revenue for both years.

- General and administrative expenses were $76.1 million (14% of revenue) in fiscal 1996, $65.7 million (14% of revenue) in fiscal 1995, and $58.5 million (14% of revenue) in fiscal 1994.

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- Research and development expenditures, excluding capitalized software, were $78.7 million (15% of revenue) in fiscal 1996, $65.2 million (14% of revenue) in fiscal 1995, and $56.2 million (14% of revenue) in fiscal 1994.

- The majority of Autodesk's basic research and product development has been performed in the U.S., while translation and localization of foreign versions is generally performed by development teams or contractors in the local market.

- Autodesk has centralized its European product-related functions, including software development, localization, quality assurance, technical publications, and production in a new software center in Neuchatel (Switzerland).

- Direct commissions paid to dealers were $12.7 million, $10.7 million, and $13.1 million for fiscal 1996, 1995, and 1994, respectively.

Interim Results

Net revenue for the three months ending April 30, 1996 reached $136.3 million, compared to $138.7 million for the same period in 1995. Net income for the quarter was $19.1 million, compared to $26.0 million for the same period a year ago.

Market Financials

Autodesk's family of products are targeted to a range of users, including mechanical, structural and electrical engineers; architects; facilities planners; technical illustrators; interior designers; surveyors; electronic system designers; multimedia, entertainment, video and game designers; and educators.

Substantially all of Autodesk's European, Asia/Pacific, and U.S. export sales are made to dealers and distributors.

Revenue Analysis by Product Line

One hundred percent of Autodesk's fiscal 1996 revenue was derived from the sale of its applications software products.

- Approximately 95% ($507 million) of revenue came from design automation products and 5% ($27 million) from multimedia products and other products.

- Sales of AutoCAD and AutoCAD updates accounted for approximately 80%, 80%, and 85% of Autodesk's revenue in fiscal 1996, 1995, and 1994, respectively.

Geographic Markets

Approximately 31% of Autodesk's fiscal 1996 revenue was derived from the U.S. and the remaining 69% from foreign sources, including exports and foreign subsidiaries.

A three-year financial summary by geographic market appears on the following page:

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Autodesk, Inc.
Three-Year Financial Summary
($ Millions)

	Fiscal Year					
			1/95		1/94	
Geographic Market	$	Percent of Total	$	Percent of Total	$	Percent of Total
Revenue						
• Americas	$195.3	36%	$182.1	39%	$177.8	42%
• Exports (a)	68.0	12%	67.2	15%	54.5	13%
• Royalties (b)	67.7	12%	48.5	10%	48.1	12%
• Europe (c)	211.5	39%	159.1	34%	138.3	33%
• Asia Pacific (c)	72.1	13%	56.9	12%	48.1	12%
(Eliminations)	(67.7)	(12%)	(48.5)	(10%)	(48.1)	(12%)
Total	$546.9	100%	$465.3	100%	$418.7	100%
Income from operations						
• Americas	$63.8	49%	$71.5	67%	$56.1	63%
• Europe (c)	53.7	42%	25.1	23%	24.7	27%
• Pacific Basin (c)	11.5	9%	10.8	10%	8.9	10%
Total	$129.0	100%	$107.4	100%	$89.7	100%

(a) Includes export revenue to Canada of $14.6 million, $15.7 million, and $16.2 million and export revenue to Asia/Pacific of $42.3 million, $36.5 million, and $26.8 million for fiscal 1996, 1995, and 1994, respectively.

(b) Includes royalty revenue to the U.S. derived from the foreign subsidiaries.

(c) Represents the operations of Autodesk's foreign subsidiaries.

Fiscal 1996 revenues increased in all of Autodesk's major geographic markets over the prior fiscal year.

- Revenues increased by 33%, 23%, and 3% in Europe, Asia/Pacific, and the Americas, respectively, compared to fiscal 1995 growth in these regions of 15%, 25%, and 4%.

- The weaker value of the dollar, relative to international currencies, favorably affected fiscal 1996 revenues by approximately $18.8 million compared to fiscal 1995.

Acquisitions

In May 1996, Autodesk acquired Creative Imaging Technologies, Inc. of La Habra (CA). The acquisition will be accounted for as a purchase.

- Creative Imaging is a software and digital imaging company that serves the interior decorating market.

- Creative Imaging developed and markets Designer's Vision™ software for product sampling and project visualization used by interior designers, specifiers, and decorating retailers to search for and view samples of fabrics, wallcoverings, flooring, paints, and

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other decorative products. The company has relationships with more than 15 top suppliers of interior finish products, including F. Schumacher & Company, Hunter Douglas Window Fashions, Imperial Wallcoverings, Kravet Fabrics, and Robert Allen Fabrics.

- Creative Imaging will be integrated with Autodesk's Advanced Products Group.

In August 1995, Autodesk acquired certain assets of Automated Methods (Pty) Ltd. of South Africa, a provider of GIS software.

Employees

As of January 31, 1996 Autodesk had 1,894 full-time employees (1,251 in North America, 463 in Europe, and 180 in the Asia/Pacific region), segmented as follows:

Marketing, sales, and product support	911
Software development	472
Quality assurance	94
Production	56
General and administrative	361
	1,894

As of May 1996, Autodesk had 1,958 employees.

Key Products and Services

Autodesk offers design automation and multimedia products as follows:

CAD/Design Automation Products

Autodesk's design automation software products are used in a variety of applications, including mechanical design and engineering, architecture, mapping/GIS, facilities management. and civil engineering.

AutoCAD, the worldwide desktop CAD standard, was introduced in November 1982 and continues to be enhanced through regular releases.

- AutoCAD, available in nearly 130 countries and 19 languages, automates the design and drafting process by enabling users to interactively create, store, and edit a variety of drawings. This drawing information may be exchanged with other applications software, databases, and mainframe CAD systems.

- The most current version of AutoCAD, Release 13, was introduced in the U.S. in November 1994. Release 13 incorporates an object-oriented database, an enhanced and fully customizable user interface, and a powerful, integrated solid modeler.

- AutoCAD is used in fields ranging from architecture and mechanical design to plant design and mapping. Professionals use AutoCAD for design, modeling, drafting, mapping, rendering, and management tasks.

- Advanced AutoCAD functionality includes a 2D and 3D drafting feature set, integrated 3D solid modeling, rendering, extensive 2D geometry such as NURBS, ellipses, associative hatching, dimensioning, text editing, and spell checking.

- AutoCAD operates in many major desktop and workstation operating environments, including MS-DOS, Windows 95, Windows NT for both Intel and Alpha, Windows 3.1, and certain UNIX operating systems (Sun Solaris, HP-UX, Silicon Graphics IRIX, and IBM AIX).

- Because AutoCAD .DWG files are portable across many platforms and operating systems, it is a viable solution for customers with multiple computer systems and a need

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to exchange drawing files in such an environment.

- AutoCAD currently has an installed base of nearly 1.5 million units.

AutoCAD LT for Windows, introduced in late 1994, is a low-cost CAD package offering a range of 2D and basic 3D drafting capabilities. The product, with an installed base of more than 250,000 seats, is suited for CAD managers, designers, and engineers requiring a powerful, standalone CAD tool, but who do not need the advanced features of AutoCAD. The product is available for Windows 95 and Windows 3.1.

AutoSketch®, first released in late 1986, is a low-cost, entry-level 2D drawing package used for creating technical diagrams, architectural layouts, electrical drawings, mechanical plans, information graphics, and presentations. It offers easy tool customization; 13 library packs with more than 2,000 predrawn symbols; editing; double-precision geometry; and the ability to write .DWG files for AutoCAD and AutoCAD LT users. It is available for Windows and DOS.

AutoCAD OEM for Windows is a selectively licensed CAD engine providing an application development environment for creating targeted or niche solutions with scaled feature sets. It is for developers and enterprise-wide solution providers requiring an embeddable CAD system in which they can scale and control the application feature set.

Mechanical CAD Products

AutoCAD Mechanical Desktop, which began shipping in the first quarter of fiscal 1997, is an integrated software application that provides advanced 2D and 3D mechanical design functions for desktop PCs. Integrated modules are provided for parametric feature-based solid modeling, surface modeling, and assembly modeling, all with associative drafting, as well as AutoCAD Release 13 and the Autodesk IGES Translator, which enables users to exchange all versions of IGES-formatted files.

AutoCAD Designer works within AutoCAD to provide 3D feature-based solid modeling and assembly modeling. It is used by drafters, designers, and engineers involved in the conceptualization, design, or drafting of mechanical parts in a range of manufacturing industries, including automotive, electrical equipment, machinery, plastics, and aerospace. AutoCAD Designer resulted from the acquisition of Woodbourne in late 1993.

Advanced Modeling Extension (AME)® 2.1 works with AutoCAD's design and drafting features to provide users with a set of solid modeling tools for constructing, manipulating, and analyzing models.

AutoSurf™ is integrated with AutoCAD, AutoCAD Designer, and AutoVision to provide easy-to-use, 3D surface-modeling tools for use on PCs and engineering workstations. AutoSurf helps users design complex mechanical component parts such as consumer products, automotive products, molds, turbines, and propellers.

Autodesk Mechanical Library, available on CD ROM via a regularly updated subscription service, currently consists of two titles:

- *PartSpec* is a digital warehouse representing more than 56 leading U.S. vendors with more than 400,000 predrawn, purchasable, 2D parts drawings (plus associated attribute information) in AutoCAD .DWG file format for insertion into AutoCAD drawings.

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- *MaterialSpec* contains a database of more than 35,000 materials from more than 300 manufacturers worldwide.

AutoCAD Map, expected to ship during 1996, will be the first in a series of mapping and GIS software planned by Autodesk. It will incorporate the drafting power of AutoCAD, the data management functionality of AutoCAD Data Extension software, automated mapping and GIS tools, plus an application programming interface for designing custom applications.

Aemulus™ and Aemulus*mf*™ software products provide bidirectional file compatibility between AutoCAD and CADAM, a mainframe CAD program.

Autodesk WorkCenter is a Windows-based system that can be customized for managing technical documents and automating workflow for design teams of varying sizes. Its management tools allow users to organize documents according to specific needs; check documents in and out of a secured, multiuser environment; and automatically manage revisions over time.

Autodesk View is a low-cost CAD preview, view, and redline tool for design teams. With Autodesk View, project managers can distribute AutoCAD files and related documents to users in a workgroup who need to view and comment on them, and be assured that the original documents will not be altered in the process.

AutoCAD Data Extension™ (ADE) is an add-on program that incorporates AutoCAD drawings with database records and other documents into one integrated environment. The graphic information created with ADE allows users to locate data within AutoCAD drawings based on entity location; properties such as color, layer or linetype; or associated data.

Through Autodesk Data Publishing, the company publishes preformatted product and reference libraries for specific markets, including PartSpec and MaterialSpec (previously discussed) and PlantSpec (scheduled to ship in 1996), which provides purchased parts information to users in the process manufacturing industry.

AutoCAD IGES Translator 5.1 provides AutoCAD drawing-data translations for the easy exchange, use and reuse of drawings created on diverse CAD systems.

Kinetix Multimedia Products

3D Studio® MAX, which began shipping in the first quarter of fiscal 1997, is a 3D modeling and animation software package specifically written to take advantage of Windows NT.

3D Studio is a graphics package for creating professional-quality 3D modeling and animation. This PC-based product runs in DOS to provide modeling, animation, and rendering tools that help users create richly textured, workstation-quality images and animations. The product is well suited for animation designers and can be used to create corporate presentations, broadcast animations, industrial design visualizations, crime reenactments, and architectural walk-throughs, as well as for education and training.

AutoVision™ provides photorealistic still renderings within AutoCAD software for DOS and Windows.

Internet products introduced by Autodesk in April 1996 include the following:

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- WHIP! Plug-in is a World Wide Web browser plug-in that lets users dynamically view 2D vector design data stored in the WHIP! file format.

- HyperWire is an authoring tool for the World Wide Web that lets users create 3D and 2D Web titles based on using simple visual objects rather than complex programming commands. These titles are based on the Java language.

Autodesk Animator Studio, the Windows-based successor to Animator Pro[R], offers a combination of 24-bit 2D paint and animation, digital video and audio tools for creating and editing components of many multimedia applications.

Cyberspace Developer Kit is a complete toolset for 3D modeling, visualization and simulation. It includes a set of object-oriented C++ class libraries to aid in building real-time, PC-based virtual reality applications.

HOOPS is a portable, commercial, 3D graphics technology developed by Ithaca Software. It allows software developers to create interactive 2D and 3D graphics applications and provides a common high-performance interface to major PC and workstation operating systems, window managers, and graphic output devices.

Customer and Dealer Support

Autodesk requires each authorized dealer and distributor to provide a professional level of technical support to customers. Dealers and distributors, including owners and franchisees of computer stores, are supported by Autodesk through technical product training, sales training classes, and direct telephone support.

- The Autodesk Premier Support Center program requires participating dealers to provide a high level of technical support with special expertise in a specified vertical industry.

- The Autodesk Systems Center Solutions Training program requires dealers to provide superior industry-specific application training to users of Autodesk products.

- Both programs require that the dealers meet certain qualifications in order to receive an industry medallion and Solutions Training status.

- As of January 31, 1996, Autodesk had more than 900 independent authorized Autodesk Training Centers worldwide. These accredited training centers offer in-depth education and training in computer-aided design skills on AutoCAD and other Autodesk products, as well as on related, independently developed software.

Although Autodesk does not provide direct user support, the company offers on-line support to customers through its Home Page on the Internet and to customers who log onto the Autodesk Forum on CompuServe. The four Autodesk Forums are the AutoCAD Forum, the Autodesk Beta Forum, the Autodesk Multimedia Forum, and the Autodesk Retail Products Forum.

Clients

Autodesk has more than three million users of its products worldwide.

A sampling of major clients includes AFC (Sweden), Anshen + Allen, Arnold Air Force Base, Avondale Industries, Consolidated Edison, Digicon S.A. (Brazil), Japan Airline Co. Ltd., Kansai International Airport Co., Marvin Windows, Parker Hannifin, SBB Swiss Federal Railroad Company, and Sony Pictures Imageworks.

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Marketing and Sales

Autodesk's customer-related operations are divided into three geographic regions—the Americas, Europe, and Asia/Pacific. As previously discussed, Autodesk has aligned its internal marketing organization around five key market groups.

Autodesk's products are marketed through a network of domestic and foreign offices, creating a worldwide support and distribution system. Products are sold worldwide in nearly 130 countries through authorized dealers, distributors, and direct sales.

- The company now has more than 4,000 Authorized Autodesk Dealers and Distributors.

- Dealers and distributors, including both owners and computer store franchisees, are supported by Autodesk and its subsidiaries through technical training, direct telephone support, periodic publications, through the Autodesk Forum, and through Autodesk's Home Page on the Internet.

- Domestically, Autodesk distributes its products primarily through its authorized dealer network. Other domestic sales are made principally to large corporations, governmental agencies, educational institutions, and users for certain low-end CAD products.

- Autodesk major accounts programs work with dealers to support companies that are regional, national, and international in scope. These services include volume purchase agreements, on-site training, and support to large corporate accounts.

- The Autodesk Federal Systems Group provides specialized services to federal government agencies through a sales office in Washington, D.C. Autodesk has also established programs for state and local governments.

- In August 1993, Autodesk and Cordant, Inc. were awarded a 12-year facilities management contract to supply the Navy Facilities Command (NAVFAC) with design, construction, and management systems through the end of the century.

  - Called the NAVFAC CAD 2 program, it is the largest architectural and engineering CAD effort ever undertaken.

  - Autodesk and Cordant will supply computer-aided design software, hardware, and support services. Intergraph also received a contract. The total amount of the two contracts may not exceed $550 million.

- Internationally, substantially all sales are made to dealers and distributors, which are supported by Autodesk's foreign subsidiaries and international sales organizations.

Autodesk works with dealer and distributor sales organizations, computer manufacturers, other software developers, and graphics peripheral manufacturers through cooperative advertising, promotions, and trade show presentations.

Autodesk holds annual "Expos" throughout the world. These dedicated trade shows, incorporated within major industry trade shows, highlight the company's products as well as a number of third-party products. Autodesk also uses mass marketing, including direct mailings, public relations, and advertising in business and trade journals.

Alliances

To support the growth of third-party developers worldwide whose applications extend and enhance the functionality of

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Autodesk's products, Autodesk has established the Virtual Corporation Partner Program. This program provides sales, marketing, technical, and financial support to Autodesk Strategic Developers.

- To date, more than 2,500 Autodesk Registered Developers worldwide have developed more than 4,500 commercially available add-on applications for Autodesk products.

- Although Autodesk derives no direct revenue from these application developers, the company believes that the availability and use of such add-on products enhances sales opportunities for the company's core products.

During fiscal 1996, Autodesk introduced the Mechanical Application Initiative (MAI) partner program, aimed at the development and marketing of products that can be integrated with Autodesk's MCAD products.

The Multimedia Plug-In Partnership extends Autodesk's franchise into the multimedia market. 3D Studio is now sold by more than 700 Authorized Dealers and Distributors, and 200 Independent Application Developers provide 3D Studio "plug-in" applications.

Competitors

AutoCAD competitors include Personal Designer and CADDS by Computervision, CADKEY by Cadkey, Inc., MICRO CADAM by CADAM Systems Company, and MicroStation by Bentley Systems.

Domestically, Autodesk's mechanical design products compete with Parametric Technology Corporation's Pro/ENGINEER and Pro/JR, the Master Series from Structural Dynamics Research Corporation, ANVIL-5000 by MCS, and the CATIA and CADAM products offered by Paris-based Dassault Systems and sold by IBM.

Competitors in the data management market include AM Workflow from Cyco and AutoEDMS from ACS Telecom.

Autodesk's primary multimedia products, 3D Studio, AutoVision, and Animator Studio, compete with products available on PCs and computer systems offered by Silicon Graphics.

- Products competing with 3D Studio include Lightwave by Newtek and Truespace by Caligari.

- Animator Studio competes with various products, including Painter by Fractal Design and After Effects from Adobe.

- AutoVision software competes with two third-party add-on products: AccuRender from Robert McNeel and RenderStar by RenderStar Technologies.

The Cyberspace Developer Kit competes with Sense8's WorldToolKit and SuperScape VRT3 from Dimension Ltd.

Autodesk also faces competition in its foreign operations from a number of products offered by foreign-based companies.

INPUT Assessment

Autodesk's strengths include its strong CAD software offerings, including AutoCAD, the worldwide de facto CAD standard. Building on the strength of AutoCAD, Autodesk has developed an integrated, diverse family of products to serve the needs of customers throughout the design automation and multimedia markets.

During 1993, Autodesk surpassed IBM to become the world's number one design automation software supplier. The company

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claims to have 60% of the PC animation software market.

Autodesk also has a strong network of partners called the "Autodesk Virtual Corporation." This network is comprised of more than 4,300 resellers, more than 2,500 authorized Autodesk developers, 900 training centers, and more than 350 user groups. The Autodesk Virtual Corporation allows the company to leverage the strength of each of its partners and extend its presence across markets and geographies.

Autodesk is working with Netscape to extend the Internet into a virtual engineering environment. Designers and engineers will use Autodesk's WHIP! technology and Netscape's Navigator Gold and Enterprise server software to collaborate on, publish, and manage design data over the Internet.

Key challenges for Autodesk include continuing to make the company grow faster than the industry through market and geographic strategies.

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COMPANY PROFILE

AUTOINFO, INC.
255 West Spring Valley Avenue
Maywood, NJ 07607
(201) 712-0020

Jason Bacher, Chairman and CEO
Martin Rubin, President and COO
Public Corporation, NASDAQ
Total Employees: 50
Total Revenue, Fiscal Year End
5/31/91: $9,624,000

The Company

AutoInfo, Inc. provides communications and data base network services and turnkey systems to the automobile parts salvage and automobile casualty insurance industries. AutoInfo's products and services include the following:

- The Orion Network is a satellite-based communications and buying network for automobile parts salvage yards.
- Parts Locator is a used automobile parts data base service for automobile casualty insurers.
- AutoInfo also sells the Checkmate Computer System, an inventory system for automobile parts salvage yards.

AutoInfo currently provides services and/or products to approximately 2,000 of the 3,000 largest automobile parts salvage yards in 49 states and 8 Canadian provinces and with 13 of the 20 largest casualty insurance carriers.

AutoInfo's strategy is to continue to expand its market share through internal growth, new product development, and acquisitions.

AutoInfo's fiscal 1991 revenue reached $9.6 million, an 18% increase over fiscal 1990 revenue of $8.2 million. Net income rose 39%, from $1.7 million in fiscal 1990 to $2.4 million in fiscal 1991. A five-year financial summary follows:

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AUTOINFO, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

	FISCAL YEAR				
ITEM	5/91	5/90	5/89	5/88	5/87
Revenue	$9,624	$8,152	$6,007	$2,726	$783
. Percent increase from previous year	18%	38%	120%	248%	N/A
Income (loss) before taxes	$2,621	$1,803	$639	N/A	N/A
. Percent increase from previous year	45%	182%	N/A	N/A	N/A
Net income (loss)	$2,403	$1,726	$639	$(1,482) (a)	$(669) (a)
. Percent increase (decrease) from previous year	39%	170%	240%	143%	N/A
Earnings (loss) per share	$0.33	$0.25	$0.10	$(0.27) (a)	$(0.17) (a)
. Percent increase (decrease) from previous year	32%	60%	137%	(59%)	N/A

(a) Includes losses from discontinued operations of $971,000 ($0.18 per share) in fiscal 1988 and $452,000 ($0.12 per share) in fiscal 1987.

Revenue for the six months ending November 30, 1991 reached $5.3 million, a 13% increase over $4.7 million for the same period in 1990. Net income declined from $1.1 million to $727,000, primarily as a result of business expansion, acquisition costs, and increased income taxes.

A summary of acquisitions made by AutoInfo follows:

- In December 1991, AutoInfo formed a joint venture with National Automotive Certification, Inc. to provide photo inspection services to the automobile casualty insurance industry. AutoInfo acquired a 51% interest in the venture in exchange for an initial cash investment of $550,000 and a commitment to fund up to a total of $1.4 million.

- In December 1991, AutoInfo acquired 38% of ComputerLogic, Inc., a provider of computerized management systems and data base services to the auto collision and parts industries. ComputerLogic offers services to auto paint distributors, collision repair shops, paint jobbers, and auto parts warehouse distributors.

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- In October 1991, AutoInfo acquired Computer Auto Salvage Ssytems, Inc. (Compass), the largest supplier of voice communication services to the auto salvage industry.

- In April 1990, AutoInfo acquired Parts Locator, Inc., a provider of voice line communications services to the automobile and motorcycle salvage industries in the western U.S.

- Also in April 1990, the company acquired Starnet, a provider of satellite-based communications services to the auto salvage industry, principally in California. Starnet's operations were integrated with AutoInfo's Orion Network.

- ADDS/Locate, Inc. (acquired in September 1990) and Recyclers Network Computer, Inc. (acquired in October 1990) were providers of computerized inventory control and management information systems to automobile parts salvage yards.

- Orion Management Corporation (acquired in 1988) and Pinnell Corporation (acquired in 1986) are satellite communications companies that provide a closed-end buying network for the automobile salvage parts industry.

As of June 1, 1991, AutoInfo had 50 employees, segmented as follows:

Software marketing and sales	10
Technical	30
Administration and clerical support	10
	50

AutoInfo's principal competitor for its Checkmate systems is Hollander Inc.

Key Products and Services

Network Services, including the Orion Network and Parts Locator, accounted for 75% of AutoInfo's fiscal 1991 revenue. The remaining 25% of revenue was derived from sales and maintenance of its Checkmate line of turnkey systems.

Network Services:

AutoInfo's Parts Locator is an on-line service that AutoInfo offers to the automobile casualty insurance industry.

- The data base for this service is selectively compiled from the parts inventories of approximately 500 automobile parts salvage yards that use AutoInfo inventory computer management

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systems. AutoInfo's host data base in Omaha (NE) is updated regularly through transmissions from the salvage yards.

- The AutoInfo Parts Locator is accessed by insurance company claims offices through a toll-free number at a cost of $7.50 for each part located.

- As of May 31, 1991, approximately 81 claims offices of 13 of the 20 largest automobile casualty insurance carriers were using the AutoInfo Parts Locator.

- In May 1988, AutoInfo entered into a non-exclusive license of its automobile salvage parts data base with ADP Automotive Claims Services (ADP/ACS), a subsidiary of Automatic Data Processing, Inc. ADP/ACS includes information obtained from AutoInfo along with information from other sources in its Salvage System data base.

The Orion Communications Network is a satellite telecommunications network marketed exclusively to automobile salvage yards, which allows them to quickly locate and purchase wholesale used auto parts.

- Currently more than 1,400 clients in the U.S. and Canada subscribe to the Orion Network, at a fee of $375 per month.

Turnkey Systems:

The Checkmate Computer System is an inventory management system that AutoInfo began marketing to the automobile parts salvage industry in March 1989.

- Checkmate consists of an integrated proprietary software package designed and developed by AutoInfo to provide inventory management, financial accounting and management reporting to automobile salvage yards. The software is packaged with an IBM PC-compatible computer and peripheral equipment into a turnkey system.

- Checkmate gives clients immediate access to used automobile parts inventory, providing information on availability, condition, and price of individual parts.

- A parts interchange data base derived from the Mitchell Interchange Manuals is integrated into Checkmate, which provides an automatic inventory-wide search for alternative parts if a specific part is not available.

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- Checkmate sells for $13,250, including hardware, software, installation, and operator training. Maintenance fees of $200 per month are also required.

In May 1991, AutoInfo introduced Checkmate Jr., a less sophisticated version of Checkmate, which sells for approximately $5,000, including hardware, software, installation, and operator training. The required maintenance plan costs $125 per month. Checkmate Jr. can be incrementally upgraded to allow the product to grow with the customer.

Over 300 Checkmate and Checkmate Jr. systems have been installed since their introduction.

AutoInfo continues to maintain and support approximately 175 client sites using the AutoInfo Yard Management System, the product that Checkmate replaces. Fees are $300 per month. AutoInfo compiles and updates used automobile parts inventories from these customers and includes this information in its AutoInfo Parts Locator Service.

Other Products And Services:

AutoInfo also offers two new products for the automobile parts salvage industry, PartPad and BidPad.

- PartPad is a hand-held data entry device for inventory management that will permit a salvage yard operator to more efficiently maintain control of yard inventory.

- BidPad is a hand-held computer system that automates a dealer's computation of the salvage value of vehicles available at auction, which will allow a dealer to access a data base of used parts values at the auction to assist him in formulating valuation for bidding purposes.

Industry Markets

AutoInfo derives 90% of its revenue from the automobile parts salvage industry and 10% from the insurance industry.

Geographic Markets

Approximately 95% of AutoInfo's revenue is derived from the U.S. and 5% from Canada.

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COMPANY
PROFILE

AUTOMATED CONCEPTS INCORPORATED
1500 Broadway
New York, NY 10039
Phone: (212) 391-2100
Fax: (212) 391-6718

President:	Frederick B. Harris
Status:	Private
Total Employees:	450
Total Revenue:	$40,200,000
FYE:	12/31/92

Key Points

- Automated Concepts Incorporated (ACI), founded in 1966, is a national information systems services consulting firm.
- ACI's Technology Training Division (TTD), based in Chicago (IL), provides comprehensive instructor-led training curricula in key technical areas on a nationwide basis.
- In 1992, more than 350 clients were served by the training division.
- ACI showed a 10.5% increase in growth in 1992.

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Company Description

Automated Concepts Incorporated (ACI), founded in 1966, is an information systems services consulting firm. The company offers a range of services, from initial project conception through system implementation, as well as education and training services.

Financials

In 1992, worldwide revenue for Automated Concepts Incorporated (net of interest expenses) was $40.2 million, a 9% increase over 1991 revenue of $36.3 million. A five-year revenue summary follows:

AUTOMATED CONCEPTS INCORPORATED
FIVE-YEAR FINANCIAL SUMMARY
($ millions)

	FISCAL YEAR				
ITEM	1992	1991	1990	1989	1988
Revenue	$40.2	$36.4	37.2	33.5	28.9
Percent increase (decrease) from previous year	10.47%	(2.23%)	11.25%	15.72%	

Employees

As of March 1992, ACI had approximately 450 employees, segmented as follows:

Marketing	10%
Customer support	5%
Research & development	5%
Computer operations	70%
General & administrative	10%
	100%

Competitors

ACI's major competitors include Andersen Consulting, Computer Task Group, Price Waterhouse & Co. and Keane. The company also has regional competitors in New York City, Chicago, New Jersey, and the Los Angeles Metropolitan area.

Key Products and Services

INPUT estimates that approximately 90% of ACI's 1992 revenue is derived from its sales of consulting and software development services and 10% from education and training.

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Professional Services

ACI's consulting support services include:

- Project planning
- Programming
- Testing and implementation
- Maintenance and enhancement
- Systems migration
- Software package and development
- Communications, real-time and systems software development
- Large scale data base management systems

Training and Education

ACI's Technology Training Division (TTD) provides training on a national basis, offering over 100 courses in the key areas of OS/2, UNIX, C, C++, modern analysis and design, and programming languages MicroFocus, COBOL, and APS.

- TTD also customizes courses for proprietary customer software. Education services include not only on-site classes, but also training documentation, student handouts, and details of variations of packaged software unique to a specific client.
- TTD markets "off the shelf" training courses designed by companies that sell packaged software. Topics include UNIX, C, ADABAS, and NATURAL.

Customers

Contract examples include the following:

- The design and implementation of a parts distribution system for Mitsubishi Electric Sales America (MESA). After the new system is

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completed, it will be used as a model for six other Mitsubishi Electronic companies.

- ACI converted and redesigned the circulation system for *The Daily News* in New York. The project entailed switching for a COBOL/DPL environment on a DEC 20 system to FOCUS running on an IBM mainframe.

Industry Markets

ACI's four top vertical industry markets for 1992 were insurance, utilities/telecommunications, banking/finance, and brokerages. ACI also has clients in aerospace, consumer products, electronics, entertainment, the federal government, health care, manufacturing, petrochemicals, pharmaceuticals, and state and local government.

Clients include AT&T, Citibank, the U.S. Department of the Interior, Ford Aerospace, Metropolitan Life, NBC, Public Service Electric & Gas, Shearson Lehman Hutton, and Spiegel.

Geographic Markets

ACI has U.S. regional offices in Chicago (IL), Los Angeles (CA), New York, (NY), Washington, D.C. and Woodbridge (NJ).

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COMPANY PROFILE

** out of business

AUTOMATED SYSTEMS CONSULTANTS, INC.
10820 West 64th Street
Shawnee, KS 66203
(800) 255-0424

A. Lee Holt, President
Private Corporation
Total Employees: 90
Total Revenue, Fiscal Year End
9/30/87: $3,000,000

The Company

Automated Systems Consultants, Inc. (ASCI) was formed in September 1980 to provide custom software/contract programming professional services to business and government. During 1988 the company expanded its offerings to include turnkey retail point-of-sale (POS) systems.

ASCI's fiscal 1987 revenue reached $3 million, a 33% increase over fiscal 1986 revenue of $2 million. ASCI management anticipates that fiscal 1988 revenue will reach $5 million.

- Company management attributes revenue growth to increased sales and new contracts and its growing reputation for providing quality work.
- The company has operated profitably since 1980.

Major competitors, by product/service area, include the following:

- Professional services: Analysts International, Computer Task Group, and CAP Gemini.
- POS systems: NCR, IBM, and MICROS.

Key Products and Services

Approximately 98% of ASCI's fiscal 1987 revenue was derived from professional services and 2% from systems integration activities.

Professional services provided by ASCI include consulting, programming support, conversions, systems analysis and design, small systems software support/maintenance, systems engineering, and facilities management. ASCI personnel has expertise and work experience in the following areas:

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- Hardware: Amdahl; Basic/Four; Control Data; Data General; DEC VAX PDP 11; General Automation; Hewlett Packard; Honeywell; IBM 34, 36, 38, 360, 370, 30xx, 43xx, PCs, and Series 1; Magnuson; Modcomp; NCR; Texas Instruments 990; Unisys; and Wang VS.

- Languages: Assembler, BAL, BASIC, C, COBOL, FMS, FOCUS, Fortran, IDEAL, Librarian, MANTIS, MARK IV, Panvalet, PASCAL, PL/1, QUICK JOB, RPG II, III, and UTILITIES.

- Software: ADA/YOURDAN, ADR/DATACOMM, CICS, DB2, DL/1, DOS/VSE, E/1, IDMS/ADSO, IMS/DB/DC, JES, McCormack & Dodge, Management Science America, MS/DOS, OS/MVS, RDB, TCAM, TOTAL, TSO/ISPF, VM/CMS, VMS, VSAM, and VTAM.

- The company provides its services under both fixed-price and time and materials contracts. The length of contracts ranges from one month to three years, with an average contract running six months.

  - Certain repeat customers have been ASCI clients for six to seven years.

  - The company currently is performing its services under 25 contracts.

Project examples include the following:

- Data base conversion from TOTAL to ADABAS for the State of Kansas.

- Total automation of the Veterans Administration's finance center under a $3 million contract ($1 million in hardware and $2 million in software and maintenance services).

- Other projects have been performed for clients such as Marion Laboratories, DST Systems, H&R Block, American Multi-Cinema, U.S. Sprint Communications, Deutz-Allis, Management Sciences Associates, Olin (Defense Systems Group), and Bulter Manufacturing Company.

During 1988 the company introduced its ASCI POS system which can be customized to accommodate retail organizations of any size.

- The system uses 80386-based microcomputers running under

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MS/DOS, UNIX, or XENIX with the Novell LAN.

- Features include automatic reorder by predetermined quantities or seasonal trends, auto-dial to mainframe, communications conforming to EDI standards, cash control management, credit and check verification, cash drawer control, optional receipt printout, and automatic deposit via ACH.

- The system is based on ASCI's Retail Ring™ concept which supports electronic communications between the stores and/or dealers, the retailer's central office, vendors, and banking institutions.

- Pricing starts at $5,995 per station, which includes hardware and software.

Industry Markets

ASCI's fiscal 1987 revenue from its professional services was derived from clients in various industries, including discrete and processing (pharmaceuticals) manufacturing, banking and finance, services, and recreation and entertainment (theatres), as well as federal and state and local government.

With the introduction of its POS system, ASCI also targets the retail/distribution industry.

Geographic Markets

One hundred percent of ASCI's revenue is derived from the U.S.

In addition to its headquarters, ASCI also has offices in St. Louis (MO) and Omaha (NE).

Computer Hardware

ASCI has the following computers installed in support of its professional services and POS activities:

- 1 Tandem NonStop II.
- 10 IBM ATs, MS-DOS.

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Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

June 1996

Automatic Data Processing, Inc.

Chairman & CEO: Josh S. Weston
President & COO: Arthur F. Weinbach
One ADP Boulevard
Roseland, NJ 07068
Phone: (201) 994-5000
Fax: (201) 994-5387
Internet: http://www.adp.com

Status:	Public
Employees:	22,000 (6/96)
Revenue:	$2,893,742,000
Fiscal Year End:	6/30/95

Key Points

- Automatic Data Processing, Inc. (ADP) provides computerized transaction processing, data communications, software, and information services, and is the leader in providing payroll processing services. ADP processes paychecks for more than 18 million U.S. workers.
- In May, 1996, ADP announced the first CD ROM application for payroll processing.
- In May, 1996, ADP announced CSS HRizon™ Alliance, the company's new IT outsourcing solution for the Human Resource Management System.
- In March 1996, Josh S. Weston, chairman and CEO of ADP, announced that effective August 1, 1996, he would relinquish his position as CEO but retain his title as chairman of the board. Arthur F. Weinbach, currently president and chief operating officer, has been elected by the board of directors to the position of president and CEO effective August 1, 1996.
- In January 1996, ADP acquired the Troy (MI)-based Sandy Corporation, a leading performance-improvement company.

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- In January 1996, ADP and SAP® America, Inc. announced an alliance to provide clients of SAP's R/3 enterprise applications software with a standard interface to ADP's payroll outsourcing services.

- In October 1995, ADP acquired control of GSI, a leading European computer services company based in France. This acquisition is expected to position ADP to become the leader of payroll and human resource information services in Europe.

- During 1995, ADP acquired The Applications Group, a leading San Francisco-based client/server and HR software implementor.

- In early 1996, the company acquired Wilco International, a provider of multicurrency international clearance and settlement systems, providing international expansion opportunities for ADP.

- Brokerage Services now provides market data services to 96,000 investment professionals in more than 1,200 firms.

- Dealer Services is currently serving 13,000 clients with more than 100,000 installed applications and more than 160,000 computer devices.

Company Description

ADP was formed in 1949 as Automatic Payrolls, Inc. Its name was changed to Automatic Data Processing in 1960. From 1949 to 1961, its payroll services were performed on unit record equipment. In 1961, ADP computerized its operations and went public.

Payroll and related services still provide the major share of ADP's revenue; however, the company also derives significant revenues from brokerage services, services to automotive dealers, and claims services for property and casualty and the collision repair industry.

The company provides computerized transaction processing, data communications, and information services to more than 350,000 clients worldwide.

ADP services include payroll, payroll tax, and human resource information management; brokerage industry market data, securities transaction processing, and investor communication services; industry-specific computing and consulting services for auto and truck dealers; and computerized auto repair estimating, auto parts availability services, and fee and utilization audits of bodily injury claims.

On January 1, 1996, the company's common stock was split two for one.

Structure and Operations

ADP is currently organized into four major groups as follows:

- Employer Services provides payroll processing, payroll tax filing, job costing, labor distribution, unemployment compensation management, and personnel information services, as well as payroll processing services. This unit also administers a shrinking batch Accounting Services business providing generic accounts receivable, accounts payable, time analysis, and general ledger/financial reporting transaction processing services.

- The Brokerage Services Group includes the following businesses:

  - Information and Processing Services (formerly two separate divisions made up of Front-office and Back-office) provides

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real-time quotation/financial information services and securities operations services.

- Investor Communication Services (formerly Proxy Services) provides shareholder mailing services. It processed over 200 million shareholder mailings and electronically processed ballots representing 69 billion shares in 1995.

- ADP Dealer Services provides processing and network services and turnkey systems to auto, truck, farm, and heavy equipment dealerships in the U.S., Canada, and Europe.

- ADP Claims Solutions Group provides claims estimating processing services and electronic information services for auto, physical damage, property damage, and bodily injury claims analysis.

Company Strategy

ADP's growth strategies are primarily focused on expanding the leadership positions of its core businesses by providing new products and superior service to its clients, as well as through the use of strategic acquisitions. Key growth strategies include:

- Delivering superior service to enhance value and improve client retention

- Providing ancillary products and services that create incremental value for existing clients

- Increasing market penetration by broadening product lines and expanding distribution channels

- Expanding existing business internationally

- Entering new markets that complement and leverage its core competencies and businesses

In the Employer Services area, ADP intends to expand its client-site products and services.

In the Brokerage Services area, ADP intends to become a major multinational provider of market data services.

In the Dealer Services area, ADP intends to become the leading global supplier of turnkey systems to auto dealerships.

Financials

ADP reported revenue of nearly $2.9 billion for fiscal 1995, a 21% increase over fiscal 1994 revenue of $2.4 billion. Net income reached $394.8 million, an increase of 20% over net income of $329.3 million the previous year.

A five-year financial summary appears on the following page.

ADP management attributed revenue growth in fiscal 1995 to the expansion of its client base, new product offerings, and acquisitions, with relatively minor contributions from price increases.

- Employer Services' revenue grew 13% in fiscal 1995, up from the 9% growth rate in fiscal 1994. Operating margins were approximately 26% in fiscal 1995, 27% in fiscal 1994, and 26% in fiscal 1993.

  - Client retention increased in fiscal 1995, and new client sales rose 15%.

  - Three relatively small acquisitions also contributed to Employer Services' growth.

  - Excluding the effect of the acquisitions, revenue growth would have been approximately 10%.

- Brokerage Services' revenue grew 8% in fiscal 1995, 20% in fiscal 1994, and 23% in 1993. The group's operating margin was

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approximately 15% in fiscal 1995, down from 16% in 1994.

- Brokerage Services began to benefit in fiscal 1992 from improved Wall Street trading volumes, which had previously been adversely affected in the years subsequent to the October 1987 market crash. The improved conditions continued in fiscal 1994 and 1995.

- Brokerage Services' pretax margin was approximately 15% in fiscal 1995, after absorbing losses from the recently acquired international quote services business referred to above.

Automatic Data Processing, Inc.
Five-Year Financial Summary
($ Millions, except per-share data)

	Fiscal Year				
Item	6/95	6/94	6/93	6/92	6/91
Revenue	$2,893	$2,468.0	$2,223.4	$1,940.6	$1,771.8
• Percent change from previous year	17%	11%	15%	10%	3%
Income before taxes	$534.3	$446.3	$386.6	$341.6	$299.6
• Percent change from previous year	20%	15%	13%	14%	5%
Net income	$394.8	$329.3	$294.2	$256.2	$227.7
• Percent change from previous year	20%	12%	15%	13%	8%
Earnings per share	$2.77	$2.34	$2.08	$1.84	$1.63
• Percent change from previous year	18%	13%	13%	13%	13%

- Dealer Services' revenue grew 32% in fiscal 1995 and 22% in fiscal 1994 as a result of improved industry conditions and several small acquisitions.

  - Operating margins were approximately 20% in fiscal 1995 and fiscal 1994, up from approximately 15% in fiscal 1993 and 1992.

  - Excluding the effects of the acquisitions, revenue growth would have been approximately 18%.

A three-year summary of source of revenue by major operating group is shown below.

Systems development and programming expenditures were approximately $193.2 million (7% of revenue) in fiscal 1995, $160.8 million (7% of revenue) in fiscal 1994, and $132.4 million (6% of revenue) in fiscal 1993. Investments have increased, especially in Employer Services, to accelerate automation, migration to new computing technologies, and development of new products.

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Source of Revenue by Product/Service

INPUT estimates that ADP's fiscal 1995 revenue was derived approximately as follows:

Processing services	72%
Network services	12%
Turnkey systems	16%
	100%

Automatic Data Processing, Inc.
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	6/95		6/94		6/93	
Item	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Employer Services	$1,615	56%	$1,424	58%	$1,311	59%
Brokerage Services	657	23%	606	25%	505	23%
Dealer Services	440	15%	334	13%	274	12%
Claims Services and other (a)	182	6%	105	4%	133	6%
Total	$2,894	100%	$2,469	100%	$2,223	100%

(a) Includes services for auto claims, wholesalers, and European payroll users.

Interim Results

Revenue for the nine-month period ended March 31, 1996, was approximately $2.6 billion, up 24% from $2.1 billion during the same period the previous year. Net income reached $334.7 million for the period, an increase of 16% year to year.

Market Financials

ADP's revenue is primarily derived from various businesses, banks, and CPAs for payroll and related services; automotive dealerships and manufacturers; and brokerage firms and insurance companies.

- Employer Services has more than 350,000 clients from a large variety of industries and markets.
- Brokerage Services primarily serves the retail brokerage market, but also services banks, commodity dealers, the institutional brokerage market, and individual nonbrokerage corporations.
- Dealer Services primarily serves auto dealerships, but also serves agricultural equipment dealers, auto repair shops, used car lots, state departments of motor vehicles, and manufacturers of autos, trucks, and agricultural equipment.
- The Claims Solutions Group has many insurance company clients, but also provides services to auto manufacturers, body repair shops, salvage yards, distributors of new and used auto parts, and other noninsurance clients.

Geographic Markets

Approximately 91% of ADP's revenue is derived from U.S. operations, with the remainder from the U.K., Western Europe, and Canada.

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In fiscal 1995, the company's international revenue was over $225 million, predominantly from businesses in Canada and Europe.

Acquisitions

In January 1996, ADP acquired Sandy Corporation of Troy, (MI).

- Each outstanding share of Sandy stock was exchanged for approximately 0.33 shares of ADP common stock, in a transaction valued at nearly $30 million.

- Sandy, a leading performance-improvement company, provides consulting, training, and communication services to the automotive industry, both at the dealer and manufacturer levels.

- Sandy Corporation had revenues last year of over $50 million.

- Sandy will now become a part of ADP's Dealer Services Group.

During 1995, ADP purchased several businesses for an aggregated total of approximately $107 million in cash and $16 million in common stock. The company also acquired several businesses that were accounted for as poolings of interest, in exchange for an aggregated total of approximately 1.2 million shares of common stock.

- In October 1995, ADP acquired control of GSI, a leading computer services company based in Paris (France). ADP now controls over 80% of the shares of GSI and expects to complete the purchase of close to 100% of GSI.

  - ADP has entered into an agreement to acquire for cash all of the outstanding shares of GSI.

  - The transaction is valued at FF 23 billion (approximately U.S. $460 million) and is subject to GSI shareholder and various governmental approvals.

  - GSI had revenues last year in excess of FF 2 billion (U.S. $400 million).

  - GSI has more than 3,000 employees, with operations in France, Germany, Italy, Spain, Switzerland, and the U.K.

  - The acquisition of GSI is expected to dilute ADP's fiscal 1996 earnings per share by 1% to 2%.

- In March 1995, ADP acquired Turbodata, a leading European auto dealer services company with 3,000 auto dealer clients in Benelux, France, and Germany.

- ADP Nederland, ADP's Dutch subsidiary, acquired Infotech, the leading provider of employer services to temporary employment agencies.

- ADP Brokerage Services acquired Wilco International, provider of multicurrency clearance and settlement services for international securities, and the GLOSS client/server system. This acquisition provides substantial international expansion opportunities for the company.

- ADP acquired Shark Information Services, a provider of real-time market information and sophisticated analytics to 5,000 institutional users.

- ADP's Claims Services Group acquired the AutoInfo salvage yard network.

- In January 1995, ADP acquired WTR, a leading benefits consulting and actuarial firm.

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Employees

As of June 15, 1996, ADP had approximately 22,000 employees.

Key Products and Services

Employer Services

ADP Employer Services offers a range of payroll and payroll-related services, including payroll processing, tax filing, human resource recordkeeping and reporting, 401(k) recordkeeping and reporting, timekeeping systems, and unemployment compensation management. On payday, ADP pays more than 18 million U.S. workers for more than 300,000 clients of all sizes in virtually every business sector.

- Payroll and tax filing services comprise over 80% of the revenues of the Employer Services Group.
- In addition to marketing its services directly, ADP has marketing relationships with many banks and CPAs whereby ADP offers its services to their clients and prospective clients.
- Employer Services are offered from 39 ADP regional processing centers located throughout the U.S. ADP also has data processing centers in Western Europe (4) and Canada (1).

ADP's payroll and payroll tax collection and filing services are Employer Services' largest single form of service.

- Such services consist primarily of the preparation and furnishing of employee paychecks and direct deposit advises, along with the necessary supporting journals, summaries, and other reports.
- As part of its regular services, ADP supplies each client with the quarterly and annual Social Security, Medicare, and federal, state, and local income tax withholding reports required to be filed by employers, W-2 withholding statements for employees, a complete record of payments for each pay period, and a quarterly historical earnings record for each employee.
- Payroll services also include the preparation of statistical and audit reports for use in client management, such as payroll and job cost distribution reports, welfare and pension fund reports, and a payroll audit report.
- AutoPay is ADP's most flexible and comprehensive payroll product, with over 200,000 clients.
- AutoPay I Payroll service targets small clients with 5 to 19 employees.
- ADP's AutoPay II payroll service focuses on companies with 25 to 500 employees. ADP has more than 200,000 clients in this segment.
- AutoPay Plus, introduced in 1983, includes an integrated payroll and tax filing service for companies with fewer than 25 employees.
- The National Accounts Division sells payroll services to companies with over 1,000 employees.
- More than 95,000 ADP payroll clients now use microcomputers for payroll input to ADP.
  - The PC/Payroll service is targeted to accounts with 50 or more employees.
  - EasyPay, introduced in late 1989, is a simplified PC service for smaller payroll clients.

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- Direct Payroll Access (DPA), introduced in 1993, enables PC-based clients who prefer more on-site control to use ADP's payroll, direct deposit, and tax filing services, while having the capability to directly access their payroll data on a PC and to print their paychecks and standard reports on site.

- ADP's automated payroll tax collection and filing service processes federal, state, and local payroll withholding taxes on behalf of ADP clients, and remits such taxes to the appropriate taxing authorities when due. About 75% of ADP's payroll clients also use ADP's tax filing service.

- Approximately 44% of Employer Services' payroll and payroll tax filing services revenue for the past three fiscal years came from ADP's heartline accounts (companies with fewer than 100 employees), 39% from major accounts (companies with 100 to 1,000 employees), and 17% from national accounts (companies with over 1,000 employees).

ADP now also offers client-site software systems for clients who prefer enhanced control and lower cost solutions by taking on payroll preparation in-house.

- CSS HRizon™, previously called the Client Server Series (CSS) HRMS, is a client/server Human Resource Management System offered by the National Accounts Division.

  - CSS HRizon is made up of four integrated functional modules—Human Resources, Benefits Administration, Flexible Spending Accounts and Payroll—forming a complete solution for medium-sized and large businesses committed to client/server technology. The software runs on Intel-based PCs and a variety of databases, and uses Microsoft Windows.

  - CSS HRizon Alliance, announced in May 1996, will provide a client/server outsourcing solution—providing, implementing, and supporting a client's HRMS, including the hardware, data base, and application software.

  - CSS HRizon Alliance, is a family of software products and HRMS solutions based on the CSS HRizon software.

  - CSS HRizon Alliance is expected to be available in June 1996

- Peachtree software products include a variety of microcomputer-based accounting packages sold to very small businesses through computer stores.

- SoftPay Services include PC-based payroll software for in-house use, targeted to businesses with under 100 employees, plus access to the ADP processing center in Atlanta for tax services, direct deposits, and implementation and client support services. There are currently more than 1,000 SoftPay Services installations.

- Full Service Direct Deposit (FSDD) was recently introduced in association with major bank partners. This allows employers to make electronic direct deposits to employee bank accounts.

ADP's human resource recordkeeping and reporting systems, operating in conjunction with a client's payroll data base, provide human resource services, including salary and benefit administration, applicant tracking, employee history, and other information reporting. ADP currently

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offers the following human resource products:

- Interactive Payroll and Personnel (IPP) is an on-line processing service targeted primarily to companies with more than 500 employees and multiple locations.
  - Personnel and payroll data are entered on a terminal supplied by ADP or on a microcomputer. The terminal is linked to a regional ADP computing center via Autonet.
  - The system provides a range of payroll-related services, including filing of federal, state, and local taxes, unemployment cost control, and various management reports, printed on site.
- HR Partner, introduced in 1990, is an IBM and compatible PC-based integrated system that assists large, single-site clients.
- PC Personnel, introduced in 1990, is a PC-based system for integrated personnel and payroll data designed for major accounts and (medium-sized) payroll clients.
- ADP offers a new-time-nd attendance product that automates collection of employee hours and integrates with ADP payroll products.
- For 401(k) plans, ADP offers full-service recordkeeping, communication, enrollment, and reporting systems, operating in conjunction with client databases.
  - During fiscal 1995, these services were enhanced by the acquisition of WTR, a leading consulting and actuarial firm.
  - ADP now offers comprehensive 401(k) administrative services relating to defined benefit plans, flexible spending, health care, and other group benefits.
- Total Time provides a comprehensive time-keeping system, fully integrated into ADP's payroll systems.
  - Total Time integrates clients' timeclocks directly into ADP's payroll computers in 39 centers.
  - More than 1,600 payroll clients now use Total Time.

Unemployment compensation management services are also offered in conjunction with ADP's payroll services and are designed to aid in the management and reduction of unemployment insurance costs. The service handles claims processing, monitors state changes against the employer's accounts, aids clients in appeals, reviews prior employment history, evaluates current tax rates, and analyzes the client's various financial options.

ADP continues to provide generic accounts receivable, accounts payable, time analysis, general ledger, and financial reporting services to 10,000 to 20,000 businesses. This client base now has the option to use client-site PCs connected to ADP's regional centers' mainframe systems.

Brokerage Services

ADP's back-office stock brokerage and related financial transaction processing services include trade processing, cage management, stock loan accounting, on-line inquiry and data collection, portfolio reporting, order matching, and on-line trading. These services are offered in the U.S. and Canada.

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- ADP also provides processing services to brokers and traders in commodity contracts, commodity futures, and options. These services are offered in the U.S. and Canada through an operations center in Jersey City (NJ).

- ADP processes approximately 20% of New York Stock Exchange transactions and is the leading third-party provider of recordkeeping services in the U.S. and Canada.

- The GLOSS client/server system, acquired with Wilco, offers global multicurrency clearance and settlement services for international securities.

Front-office database, news, analytic, and quotation electronic information services—provided by ADP to the investment and brokerage community—include supplying quotations, financial news, and other information to terminals located on brokers' desks.

- ADP supports approximately 96,000 market data terminals in over 1,200 firms. Most of these terminals are FS Partner intelligent workstations, supported by IBM PS/2 PC servers, and operating on more than 1,500 LANs.

- FS Partner—ADP's stock quote and branch automation service—is an IBM PS/2-based service that links microcomputers with various stock exchanges, ADP computers, and client computers to provide market data and proprietary brokerage and management information applications for the front office.

- FS Partner clients include Merrill Lynch, Shearson Lehman, First Boston, Smith Barney, Kidder Peabody, and Raymond James Financial Inc.

- ADP has introduced an advanced-function FS Partner for institutional users.

- Front-office, market data services, and quote operations are supported from a data center in Mt. Laurel (NJ).

ADP also provides these services through interactive workstations for all active commodities, currencies, and interest rate futures trading.

ADP's Investor Communication Services (ICS) is the largest independent provider of shareholder mailing services in the U.S. and Canada.

- ICS, with its distribution center in Edgewood (NY), handles shareholder mailings to investors whose securities are left in street name with their brokerage firm or bank.

- During fiscal 1995, ADP handled over 200 million mailings for more than 11,000 publicly held companies. Shareholder ballots representing approximately 69 billion shares were electronically processed.

- ShareLink, introduced in 1993, permits clients to send laser-printed dividend checks with personalized communications to their shareholders.

- StreetLink, introduced in 1994, is a cost-effective alternative to traditional glossy, expensive quarterly reports that are printed and mailed within three days.

ADP also offers its institutional and international clients real-time news processing systems, real-time fixed income, foreign exchange, and money market information, and sophisticated analytics.

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The Power Partner service allows clients to build and integrate market information, securities processing systems, broker productivity tools, client applications, and third-party software into their workstations.

ADP Dealer Services

ADP Dealer Services provides turnkey systems to more than 13,000 auto, truck, and farm equipment dealerships and manufacturers in the U.S., Canada, Mexico, Germany, France, the Netherlands, the U.K., and Taiwan.

During fiscal 1995, Dealer Services continued to increase market share in North America through the acquisition of three companies that provide systems to Chrysler, Ford, General Motors, Audi, and Volkswagen dealers.

Auto dealers use ADP's on-site systems to manage their accounting, inventory control, factory communications, scheduling, leasing, sales, and service activities. In addition, ADP offers more than 95 manufacturing subsystems for warranty processing, price updates, and factory ordering.

- Applications supported include inventory control, general accounting control, lease management, automated parts cataloging, parts invoicing, service merchandising, finance and insurance, repair order billing, accounts payable, check writing, payroll processing, electronic document storage and archiving, and laser printing services.
- ADP MAX 8800 features UNIX-based software and RISC technology. It can support a dealership of virtually any size—from a single franchise to a multi-franchise, mega-dealer operation with more than 500 terminals.
- ADP's small dealership systems are customized to meet specific needs. The turnkey systems support a range of functions, from integrated accounting to dealer-to-factory communications.
- ADP's Integrated Office℠, introduced in 1994, combines Lotus 1-2-3 and WordPerfect onto ADP's UNIX-centered Motorola platform. It enables users to work with spreadsheet and word processing programs on ADP terminals.
- ADP Lease Quote™, introduced in 1992, allows dealers to simultaneously compare multiple leasing sources, giving sales personnel the ability to show customers side-by-side funds sources and buy-versus-lease comparisons.
- ADP LaserStation™ allows dealers to print from a single laser printer all types of customer communications, including customer satisfaction surveys, service reminders, invoices and statements—replacing costly preprinted, carbonized forms. More than 12,000 LaserStations are installed worldwide.
- Automated Collision Estimating (ACE) integrates ADP's repair estimating application for auto body shops with its parts and service applications.
- Document Storage & Data Archiving—a paperless archiving system—uses optical disk and scanning techniques to electronically scan, store, and retrieve purchase orders, invoices, checks, other documents, and customer signatures.
- The New Vehicle Order System increases vehicle order accuracy, improves vehicle

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management, and reduces floor plan interest expense.

- The Used Vehicle Network allows dealers to manage their used vehicles more efficiently.

ADP's Manufacturer-Dealer Communications uses an on-site computer to link manufacturers with their dealers for ordering vehicles, warranty claims processing, delivery reporting, pricing updates, and vehicle and parts locating. These dealerships can also use the service for other processing functions such as financial reporting and inventory management.

ADP also provides data communication networks to link dealers to state department of motor vehicle databases for lienholder and driver's license information and vehicle registration services.

Claims Services

Through its Claims Solutions Group (CSG), ADP provides computerized estimating and availability services to insurance companies, claims adjusters, repair shops, and salvage yards involved in auto collision repair and valuation in the U.S. and Canada.

CSG offers the following product lines:

- Audatex is an on-line collision repair estimating system. The system links portable and stationary client terminals to ADP's proprietary database in Ann Arbor (MI). The database contains part descriptions, part numbers, current part prices, and cost and labor hours information on repairing and replacing parts for virtually all models of autos and trucks produced since 1970.

- Vehicle Valuation Services is an automated valuation service by which ADP provides reports to its clients to enable them to determine the value of cars or trucks that have suffered a total loss. This database contains current pricing information based on millions of used cars that are advertised for sale by car dealers and individual owners in the U.S. and Canada and on sales records of certain auto dealer clients.

- Parts Exchange is an automated parts locating and pricing service provided to insurers, manufacturers, distributors, and repair shops. The service offers data—including comparative costs, location, and availability—on parts from more than 1,000 stocking distributors.

  - Parts Exchange-New searches for new parts availability of over 3 million parts from more than 1,000 stocking distributors.

  - Parts Exchange-Salvage provides identification, pricing, and location of recycled parts available from dismantlers and salvage yards throughout the U.S.

- Through its Hollander parts services business, CSG supplies inventory management systems to over 3,000 salvage yards. EDEN, its communications network, allows electronic parts location between yards.

- ShopLink enables body shops to prepare computerized repair estimates of damaged autos and transmit them directly to an insurance company for claim approval. About 1,500 high-quality repair shops now use this service.

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- Audapoint, introduced in late 1992, is a portable laptop estimating system designed for claims adjusters. Graphics, text, and data of the complete Audatex database are stored on CD ROM for interactive access.

- PenPro, introduced in 1994, is the first pen-based mobile claims workstation. Estimating tools are delivered on a touch-screen laptop that includes a one-gigabyte digital graphics database with parts data and repair times for all vehicles manufactured since 1975.

- Photolink is a digital imaging system that can integrate images into electronic files to support claims information.

- Accupro is a property estimating system for homeowners' claims, designed for field appraisers.

As a result of its acquisition of National BioSystems, ADP can evaluate the appropriateness of medical treatment and invoicing for auto accident victims.

- The core product, Provider Bill Audit, evaluates soft-tissue injury claims.

- National BioSystems' clinical databases and outcomes measurement can also be strategically important for broader health care services.

CSG is a major user of ADP's Autonet network for data communications between insurance company claim centers and ADP's database of auto parts and repair-labor information.

In 1995, CSG enhanced its parts services by acquiring the AutoInfo salvage yard network, serving 3,000 clients.

ADP International

ADP is committed to expansion outside the U.S. In fiscal 1995 the company's international revenue was over $225 million, predominantly from businesses in Canada and Europe.

In various European countries, ADP offers its Employer, Brokerage, and Dealer services.

Through its subsidiaries, ADP Nederland B.V., ADP Financial Information Services (U.K.) Limited, and ADP Network Services Limited (U.K.), ADP provides a full range of employer services for 23,000 clients.

- ADP Nederland is a leading provider of payroll and human resource services. In fiscal 1995, it added an offering for the large government sector.

- ADP Nederland also acquired Infotech, the leading provider of employer services to temporary employment agencies.

- ADP has extended its services in the U.K. to include outsourced payroll administration.

The Brokerage front-office business now has 2,200 client terminals in 14 countries outside North America.

- In 1995 ,Brokerage Services acquired Wilco International, which offers a rapidly growing global multicurrency clearance and settlement service for international securities.

Dealer Services currently provides dealer management systems to over 5,000 clients outside North America.

- ADP-Autonom is a leading supplier to General Motors/Opel dealers in Germany.

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- In the U.K., ADP-Modems delivers systems to General Motors/Vauxhall.

- In March 1995, ADP acquired Turbodata, a leading European auto dealer services company with 3,000 clients in Benelux, France, and Germany.

- During fiscal 1995, Dealer Services also expanded its international presence by acquiring a small company in Taiwan.

Other

ADP Network Services also maintains ADP's Autonet packet-switched teleprocessing network. Autonet's prime function is to aid other ADP divisions with more efficient data communications.

The ADP Credit Corp. subsidiary provides computer leasing and financing services, primarily to clients of Dealer Services in the U.S. and Canada who lease on-site computers as part of ADP's total service solution.

Computer Hardware

ADP uses more than 100 mainframes (excluding minicomputers) in its various data centers.

- Employer Services maintains about 45 data centers in various locations in the U.S. and Europe. Services are offered on a variety of computer platforms including IBM, IBM-compatibles, Digital Equipment Corporation, Apple, Motorola, and Hewlett-Packard.

- Brokerage Services maintains operations centers in Mt. Laurel and Jersey City (NJ), using primarily IBM, DEC, and Amdahl systems.

- Dealer Services maintains data centers throughout the U.S. and Canada.

- Claims Services uses the Network Services data center in Ann Arbor to provide services to its clients.

- ADP Network Services maintains its primary data center in Ann Arbor (MI). Equipment used to provide network services includes a large number of DEC System 10s and 20s and DEC VAXs.

Marketing and Sales

ADP markets its products and services through a direct sales force.

Peachtree software is marketed through computer stores and other retail outlets.

Alliances

In January 1996, ADP and SAP® America, Inc. announced an alliance to provide clients of SAP's R/3 enterprise applications software with a standard interface to ADP's payroll outsourcing services.

- This interface will provide complete payroll processing, in addition to allowing SAP customers to use ADP's other value-added services.

- The partnership also provides for the sharing of clients, as well as joint marketing and sales efforts.

Employer Services has various alliances as follows:

- ADP has formed a joint venture with Checkfree Corporation to provide electronic banking and bill payment services to small businesses.

- ADP has licensed Kronos' timekeeping software for use with its human resources products/services.

- ADP has a source code license with PeopleSoft for its client/server products.

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Dealer Services alliances include:

- ADP has entered into an OEM agreement with Motorola to purchase its UNIX/RISC computer systems.
- The company also has partnerships with various manufacturers.

Competitors

ADP's competitors, by service area, include the following:

- Employer Services—Ceridian Employer Services, Paychex, and various regional and local processors, including banks, accounting firms, and independent businesses
- Brokerage Services—Reuters/Quotron, ILX/Thompson Financial, Beta, and SunGard
- Dealer Services—Reynolds and Reynolds, and UCS

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INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

August 1996

Auto-trol Technology Corporation

Chairman & President: Howard B. Hillman
12500 North Washington Street
Denver, CO 80241-2400
Phone: (303) 452-4919
Fax: (303) 252-2249
Internet: http://www.auto-trol.com

Status:	Public
Employees:	353 (9/95)
Revenue:	$25,591,000
Fiscal Year End:	9/30/95

Key Points

- Auto-trol Technology Corporation provides software systems integration and consulting services, specializing in graphics-oriented applications for computer-aided design, manufacturing, and engineering (CAD/CAM/CAE).
- In June 1995, Auto-trol acquired Metaware, Inc., doing business as Centra 2000, Inc., including the company's CENTRA 2000™ system.
- The effects of declining margins on hardware sales and the lack of revenue growth from products in development have had a negative impact on revenue and net income for the past seven years. During fiscal 1995, Auto-trol implemented various cost-containment efforts to streamline both domestic and international operations, including a 7% reduction in personnel.

Company Description

Auto-trol, founded in 1962, develops, integrates, markets, sells, and supports products for end-user markets involved in product data management, physical network management, mapping, technical illustration, design, engineering, drafting, and manufacturing processes.

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Traditionally, Auto-trol sold proprietary hardware; however, reduced margins on hardware products have led the company to refocus sales and support from hardware to internally developed software and systems integration. The company continues to sell hardware, primarily as part of a total systems solution.

Though Auto-trol is a public company, it is very tightly held, as approximately 97% of Auto-trol's stock is held by the company's President and Chairman of the Board, Howard B. Hillman, and the Hillman family trust.

Organization and Structure

Headquartered in Denver (CO), Auto-trol has offices in the metropolitan areas of Charlotte (NC), Chicago (IL), Denver (CO), Detroit (MI), Houston (TX), Irvine and San Francisco (CA), McLean (VA), Orlando (FL), Parsippany (NJ), and Rochester (NY).

Auto-trol's U.S. subsidiaries include Auto-trol International Corporation, AT Development Inc., Auto-trol Advertising, Inc., and Auto-trol Technology Ltd. (Canada).

The company also has international subsidiaries in Germany, Sweden, and the U.K., with one branch location in Australia.

The company also has a network of independent distributors and sales agents in several international locations.

Company Strategy

Auto-trol's strategy is to compete on the basis of quality and technical expertise. The company believes that the functionality of its applications products, technical support, and responsiveness to customer needs enhances its competitive position. Although price is a competitive factor, Auto-trol believes that customers value product functionality and service above cost.

Auto-trol believes its products to be functionally competitive. However, in 1995 it lowered the prices on its PDM and network configuration products to increase their competitiveness.

Auto-trol believes that by offering customers a broad range of applications and options, from analysis through implementation and ongoing support, it is able to develop long-term relationships with its customers and expand into new markets.

During 1995 Auto-trol continued to shift its sales toward internally developed software and system integration services to fight declining margins from hardware sales. To support these efforts, the company has been increasing investment in research and product development, including a 12% increase in spending in fiscal 1995.

In 1996, the company is continuing to increase investment in new product technology in the product data management (PDM), network configuration, and manufacturing computer-aided design (M-CAD) markets.

Financials

Auto-trol's fiscal 1995 revenue was $25.6 million, a decrease of 27% over revenue of $35.0 million in fiscal 1994. A net loss of $10.8 million was incurred in fiscal 1995, as compared to losses of $6.5 million the previous year.

A five-year financial summary is shown on the following page.

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Auto-trol Technology Corporation
Five-Year Financial Summary
($ Millions, except per-share data)

	Fiscal Year				
Item	9/95	9/94(a)	9/93	9/92	9/91
Revenue	$25.6	$35.0	$38.3	$58.9	$64.4
• Percent change from previous year	(27%)	(9%)	(35%)	(13%)	(31%)
Loss before taxes	$(10.7)	$(7.1)	$(10.5)	$(9.1)	$(8.0)
• Percent change from previous year	(51%)	32%	(15%)	(14%)	(627%)
Net loss	$(10.8)	$(6.7)	$(10.5)	$(9.1)	$(7.9)
• Percent change from previous year	(61%)	36%	(15%)	(15%)	(508%)
Loss per share	$(0.35)	$(0.35)	$(1.05)	$(1.36)	$(1.17)
• Percent change from previous year	-----	67%	23%	(16%)	(516%)

(a) Figures for fiscal 1994 are restated to reflect the acquisition of Metaware, Inc. in June 1995.

Management attributed fiscal 1995 losses to the following:

- Declining sales of products based on the Series 5000 and 7000 platforms, due to less expensive alternative products on the personal computer platform, which continue to erode Auto-trol's installed base of UNIX design and drafting products

- Operating losses due primarily to the lack of revenue growth from products in development in the M-CAD, PDM, and network configuration markets

Research and development expenditures were approximately $8.8 million (35% of revenue) in fiscal 1995, compared to $7.9 million (23% of revenue) in fiscal 1994, and $8.3 million (22% of revenue) in fiscal 1993.

Revenue Analysis by Product/Service

Approximately $10.8 million (42% of revenue) of Auto-trol's fiscal 1995 revenue was derived from hardware and software sales, a decrease of 34% from the previous year.

A three-year source of revenue summary is shown on the following page.

In fiscal 1995, total revenue was derived approximately as follows:

Software sales	23%
Hardware sales	19%
Customer support	43%
Educational services	7%
Consulting services	8%
	100%

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Auto-trol Technology Corporation
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	9/95		9/94(a)		9/93	
Product/Service	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Sales	$10.8	42%	$16.4	47%	$15.9	42%
Services	14.8	58%	18.6	53%	22.4	58%
Total	$25.6	100%	$35.0	100%	$38.3	100%

(a) Figures for fiscal 1994 are restated to reflect the acquisition of Metaware, Inc. in June 1995.

- Total software revenue declined $3.0 million (33%) compared to fiscal 1994, as a result of reduced sales of the products based on the Series 5000 and 7000 platforms.

- Total hardware revenue fell $2.7 million (36%) compared to fiscal 1994, as the company continued to shift emphasis away from hardware sales and support.

- International sales declined $1.8 million (20%). International hardware sales decreased $1.9 million while international software sales revenue increased $82,000 (3%).

- Domestic hardware sales decreased $1.5 million (57%) in fiscal 1995 and domestic software sales fell $2.3 million (46%).

Interim Results

Revenue for the nine-month period ending June 30, 1996 was $16.7 million, a 16% decrease over revenue of $20.0 million for the same period the previous year. Net losses for the period grew 12%, from $7.6 million to $8.5 million.

- Total sales revenue decreased 11% for the period due to a 4% decline in software revenue and a 19% decline in hardware revenue.

- The decline in revenue was attributed to reduced sales of some of the company's mature products offset by revenue growth in the PDM and network configuration markets.

- Total services revenue fell 21% for the period due to a 48% decline in hardware maintenance revenue, a 19% reduction in software maintenance revenue, and a 3% decrease in billable services and training.

- Research and development expenses were approximately 41% of revenue for the period, compared to 32% the prior year. The increase was due in part to a 6% increase in spending, coupled with the overall 16% decrease in total revenue, and the restatement of figures to reflect the acquisition of Centra 2000, Inc. in June 1995.

Market Financials

Auto-trol markets its products and services primarily to the petroleum, pharmaceutical, chemical, manufacturing, engineering, and public utility industries.

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The company also markets to federal, state, and municipal government agencies.

Geographic Markets

Approximately 44% of total revenue was derived from the U.S. in fiscal 1995, and the remaining 56% from international sources. In fiscal years 1994 and 1993, approximately 46% of revenue was derived from international sources.

A three-year geographic source of revenue summary follows:

Auto-trol Technology Corporation
Three-Year Geographic Source of Revenue Summary
($ Millions)

	Fiscal Year					
	9/95		9/94		9/93	
Geographic Market	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
U.S.	$11.3	44%	$18.8	54%	$20.7	54%
Europe	7.2	28%	7.6	22%	9.6	25%
Canada	6.0	24%	8.2	23%	7.3	19%
Other international	1.1	4%	0.6	1%	0.8	2%
Total	$25.6	100%	$35.0	100%	$38.3	100%

Acquisitions

In June 1995, AT Development Inc., a wholly owned subsidiary of Auto-trol, acquired a 100% interest in Metaware, Inc., doing business as Centra 2000, Inc., for 1.2 million shares of Auto-trol common stock.

- Auto-trol exchanged four shares of common stock for each share of Centra 2000 common stock outstanding.
- Existing Centra 2000, Inc. shareholders also received a cash bonus and additional Auto-trol stock in each of the next four years. Receipt of the stock is contingent upon meeting a development schedule and market acceptance of the Centra 2000 product.
- Acquired in the transaction was the CENTRA 2000 system, a product data management, document management, and workflow system.

Employees

As of September 30, 1995, Auto-trol had 353 employees, segmented as follows:

Marketing	17
Sales and support	87
Customer support	42
Research and development	142
Administrative support	65
	353

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Key Products and Services

Software

CENTRA 2000™ system—A product data management, document management, and workflow system that is specifically designed for engineering, manufacturing, technical publishing, petrochemical, and other operations

- CENTRA 2000 is intended for scaleable implementation from the workgroup to the entire enterprise.
- This system manages the pure data environment, audio/video, and large document assemblies, in addition to traditional product data management functions.
- The core CENTRA 2000 technology was used to develop the NASA Electronic Library System and to map and track the parts list for the space station.

KONFIG™—Advance software for physical network, cable/wire, and asset management of data, voice, or video networks

- KONFIG software stores and models the entire network infrastructure in Oracle's relational database management system, including both active elements such as workstations, hubs, routers, and switches, and passive elements such as cables, connectors, distribution frames, and patch panels.
- A graphical representation of the network can be automatically generated from the database and overlayed on a facility drawing.

Mozaic™—A suite of software applications to take a product from conceptual design through the manufacturing and assembly processes. The basic Mozaic product includes the following modules:

- Mozaic Assembly allows the user to perform "top down" or "bottom up" assembly modeling, using solid and/or surface models.
- Mozaic Modeler provides a set of tools to perform conceptual and detail design work.
- Mozaic Drafter provides 2-D drafting capabilities.
- Optional modules include Mozaic Surfacing, Mozaic manufacturing, and gateways.

Series 5000™—Auto-trol's flagship product is a graphics design platform consisting of graphics tools, macro languages, and a relational database query language.

- Series 5000 is primarily used in the architectural, engineering, and construction industries.
- Series 5000 also has a set of accompanying products such as data converters, plotter drivers, and application-specific tools.

Series 7000™ system—A suite of graphics products used to design and document mechanical parts and assemblies

- Series 7000 system is primarily used by manufacturing companies.
- The system is used for 3-D part design, the creation of numerical control machining programs, and the engineering analysis of mechanical parts and assemblies.

Tech Illustrator™—Consists of Auto-trol's Electronic Publishing Solutions (EPS) family, a suite of application and converter products

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- The EPS product line enables compliance with military and commercial standards for publishing operations.

- EPS provides access to a range of reference material ranging from legacy hard copy and electronic archives to current digital 3-D design data, for use in creating illustration views.

Geostation® GIS—An integrated exploration data management and mapping software product

- Geostation is used as a subsurface exploration tool in oil and gas exploration, and for assessment of mineral rights associated with land.

- Geostation is also used in the mapping and cartography industry.

Hardware

Auto-trol integrates hardware from suppliers, including Hewlett-Packard and Sun Microsystems, Inc.

Services

Consulting services—Services include software and hardware needs assessments, system configuration and implementation of products, third-party integration, and system customization.

The company also occasionally develops custom software or modifies its existing software products for specific customer needs. This service is sold in conjunction with product sales.

Educational services—Product training programs are offered for Auto-trol's applications. The company also provides certified HP and Sun Microsystems training.

Technical support—Service is provided by Auto-trol field engineers from locations across the U.S. and through the company's international subsidiaries and distributors, all of which provide installation, preventive maintenance, repair service, and assistance in solving customer operating problems. In addition, a technical support staff located in Denver is available to assist in servicing customers' systems.

Marketing and Sales

Auto-trol markets and sells its products and services in the U.S. via a direct sales force, through 12 sales offices.

Products are marketed in Europe through wholly owned subsidiaries with offices located in Germany, Sweden, and the U.K.

The company markets its product in Canada through a wholly owned subsidiary, Auto-trol Technology (Canada) Ltd., and in Australia through a company sales office.

Export sales to South America and the Pacific Rim countries are handled by independent distributors.

Competition

Auto-trol's primary competitors include the following:

Product data management—Sherpa Corporation, Xerox/Documentum, Workgroup Technologies, and Structural Dynamic Research Company

Process industry and technical illustration—Intergraph, Inc.

Physical electronic network—Cambio, Visionel, and Accugraph Corporation

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Manufacturing and computer-aided design—Parametric Technology Corporation, Structural Dynamic Research Company, and Computervision Corporation

INPUT Assessment

Auto-trol has traditionally focused on providing high-quality products, and has not competed on the basis of price. However, in order to return to profitability, the company must reduce manufacturing costs sufficiently to be able to offer its quality products at competitive prices.

With increased levels of research and development spending, the company is continuing its efforts to replace mature products that have waning revenue and regain a competitive postion in the marketplace.

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IT 2000

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Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

May 1994

Avalon Software, Inc.

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Chairman: Kim Sheridan
President & CEO: Gary Gibson
3716 East Columbia
Tucson, AZ 85714-3414
Phone: (602) 790-4214
Fax: (602) 750-0822

Status:	Private
Employees:	190*
Revenue:	$ 20,000,000*
Fiscal Year End:	4/30/94

*Company estimate

Key Points

- Avalon Software is one of the industry's first vendors to deliver a new generation of integrated open-system manufacturing, financial and distribution software applications and the only company shipping these applications with support for ORACLE and SYBASE relational database management systems (RDBMSs).
- The company's revenues have increased dramatically, from about $3 million in fiscal 1991 to an estimated $20 million in fiscal 1994.
- Avalon has complemented its direct sales efforts with a number of international distributors and hardware partners. Its products are now available in 14 languages.
- In February 1992, the company enhanced its management team by bringing on two former Oracle executives with extensive backgrounds in manufacturing software. Gary Gibson was installed as chief executive officer and M.R. Rangaswami as vice president of marketing.

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- Avalon was one of four strategic partners invited to participate in Oracle's June 1992 introduction of its ORACLE7 RDBMS.

Company Description

Avalon Software develops and markets the CIIM™ family of client/server manufacturing distribution and financial applications software for the global enterprise. The company has more than 150 customers and 225 installations worldwide in the discrete, repetitive and hybrid manufacturing industries.

Founded in 1973 by Kim A. Sheridan, the company changed its name from Interactive Information Systems, Inc. in June 1992 to reflect its new vision and product strategy for the 1990s.

Structure and Operations

Avalon is headquartered in Tucson and has North American offices in Atlanta, Boston, Chicago, Cincinnati, Dallas, Lincoln (RI), Los Angeles, Minneapolis, San Francisco and Secacus (NJ).

Outside the U.S., Avalon has offices in Australia, Japan, Singapore, the U.K. and Belgium.

Company Strategy

Avalon Software's mission is to be the leading provider of client/server manufacturing and distribution software solutions for the global enterprise.

Avalon continues to support the latest releases of ORACLE and SYBASE RDBMSs. Because Avalon uses native development tools from Oracle and Sybase to generate separate applications sets, upgrades are usually smooth when either vendor changes their product.

- CIIM 8.6, which shipped in January, supports the ORACLE7 database.

- Support for Sybase's latest database (SYBASE System 10) is expected with the release of CIIM 9.0 later this year. Avalon Software is currently migrating its software from Sybase's APT generator to Sybase's new Momentum line of development tools, most of which are still in beta testing.

Avalon is breaking CIIM's 12 modules into smaller segments so that users will be able to create custom solutions from off-the-shelf software.

Avalon management believes the company can maintain revenue growth of more than 100% per year on the strength of its management, hardware and software partners and increasing market demand for client/server solutions.

Financials

It is estimated Avalon Software's fiscal 1994 revenue will reach $20 million, a 122% increase over fiscal 1993 revenue of $9 million. A four-year financial summary follows:

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Avalon Software, Inc.
Four-Year Revenue Summary
($ Millions)

	Fiscal Year			
Item	4/94	4/93	4/92	4/91
Revenue	$20.0	$9.0	$5.4	$3.2
• Percent increase from previous year	122%	67%	69%	N/A

Market Financials

Avalon targets the Global 500 industrial corporations.

Avalon Software markets its CIIM product to the discrete and process manufacturing industries, including companies in automotive, computer, pharmaceutical, aerospace/defense, electronics, custom job shop, chemical/material, food processing and industrial and farm equipment.

Approximately 30% of revenue comes from discrete manufacturers and 70% from hybrid manufacturers.

Approximately 55% of revenue is derived from software licenses, 15% from software maintenance and 30% from training, consulting, implementation and customization services.

About 60% of sales are related to ORACLE-based products and 40% to SYBASE-based products. Although Avalon has supported the ORACLE RDBMS longer, the SYBASE product is becoming a larger part of the revenue mix due to less competition on the SYBASE platform.

Geographic Markets

Approximately 70% of Avalon Software's fiscal 1994 revenue was derived from the U.S. and 30% from international sources, including Europe, the Asia/Pacific and Latin America.

Employees

Avalon has approximately 195 employees, segmented as follows:

Marketing and sales	37
Customer support	67
Research and development	66
Computer operations	10
General and administrative	15
	195

Key Products and Services

Avalon Software's flagship product, Avalon CIIM, is a fully-integrated family of manufacturing, distribution and financial software applications that supports industry-leading relational databases, open systems and CASE.

CIIM employs the following technologies with its software:

- Relational databases—CIIM is available on ORACLE and on SYBASE relational databases. CIIM is developed in each

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database's native fourth generation programming language to maximize performance and application integration capabilities across the enterprise.

- Open systems—CIIM is widely scalable and can operate on virtually any platform. It can run on the same platforms as ORACLE and SYBASE.

- Client/server architecture—CIIM's client/server architecture delivers economies of computing hardware and improved performance. CIIM (the application) resides on a client (intelligent PC or workstation) while the database resides on a server (workstation, midrange or mainframe).

- CASE—CIIM uses Sybase's Deft CASE tools, enabling users to prototype their application before implementation.

CIIM modules include:

- Inventory Management
- Order Entry
- Configurator
- Purchasing
- Shop Floor Control
- Bill of Material
- Master Scheduling
- Material Requirements Planning
- Capacity Planning
- Accounts Receivable
- Accounts Payable
- General Ledger

CIIM 8.6 for ORACLE, released in January 1994, incorporates new functionality as follows:

- New repetitive manufacturing capabilities to streamline manufacturing processes, including automated vendor releasing, planned order consumption and automated material dispatching

- Enhanced financials for international manufacturers and new invoicing, credit memo and check processing features to simplify accounts payable and receivable.

CIIM 9.0, scheduled for release during the second quarter of 1994 will include the following features:

- Work flow features built into modules to organize various manufacturing tasks and document routing.

- Enhanced modules for purchasing, procurement, accounts payable and receivable.

- Inventory enhancements such as tracking parts by lot number, batch number or other user-defined units.

- Better financial reporting and executive information systems capabilities.

CIIM is currently available in English, Arabic, Chinese, Czechoslovakian, French, German, Hungarian, Italian, Japanese, Korean, Portuguese, Russian, Spanish and Swedish.

Pricing for Avalon CIIM ranges from $25,000 to $750,000, depending on the hardware configuration, number of users and modules.

Support Services:

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Support services include on-site training and consulting for design, implementation and maintenance, integration and customization.

Avalon Software generally relies on third-party consultants to provide systems integration and extended implementation services. These services are billed separately on a time-and-materials basis.

Clients

CIIM clients include Allied Signal, AT&T, AutoLite, Brown & Williamson, Caterpillar, General Dynamics, General Electric, Hoechst-Roussel, IBM (Austin, TX), John Deere & Co., Johnson & Johnson, Kimball International, Motorola, Pepsi Cola, SAAB Scania, TRW Koyo and Volkswagen de Mexico.

Marketing and Sales

Products are sold directly through North American offices in Atlanta, Boston, Chicago, Cincinnati, Dallas, Lincoln (RI), Minneapolis, San Francisco, Secacus and Tucson and international offices in Australia, Japan, Singapore, the U.K. and Belgium.

Products are also sold internationally through more than 24 distributors in Europe, the Asia/Pacific and Latin America.

- Itochu Techno-Science (formerly C. Itoh) markets the Sybase version of CIIM in Japan and NEC is the exclusive marketer of the Oracle version of CIIM in Japan.
- Andersen Consulting distributes CIIM in Taiwan.

Alliances

Avalon Software has strategic alliances with major hardware and software vendors, including Data General, DEC, Hewlett-Packard, IBM, NCR, Sequent, Sun Microsystems, Unisys, Oracle and Sybase.

- Avalon has been a member of Oracle's VAR Program, a component of the Oracle Business Alliance Program, since 1986.
- Avalon is a Data General Independent Software Vendor and has ported its CIIM software for ORACLE to run on Data General's line of RISC-based AViiON servers.
- Avalon is an IBM Industry Application Specialist for the RS/6000.
- Avalon is a Premier Provider for Hewlett-Packard.

Competitors

Major competitors that also offer open systems products include Oracle Systems Corporation and SAP America.

Assessment

Avalon Software has a head start on several other major manufacturing software vendors that still use proprietary operating systems for their products, including Marcam (IBM AS/400) and System Software Associates (IBM AS/400), and relatively little competition in the Sybase market.

The company's strengths include the availability of Sybase and Oracle versions of its product, an expanding international

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market presence, a strong client base and good client references.

Avalon's challenges include maintaining both the Oracle and Sybase versions of its products and managing its rapid growth.

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Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

May 1997

Baan Company N.V.

Vanenburgerallee 13
3882 RH Putten
The Netherlands

Tel: +31 341 37 5555
fax: +31 341 37 5561
http://www.baan.com

CEO and chairman of the board:	Jan Baan
Status:	Public
Number of Employees(end 1996):	2,389
Revenue (FYE 31-12-96):	$388 million

Contents

Company Description 2
Operations and Structure 2
Company Strategy 3
Financial Information 3
Market Analysis 4
Key Products and Services 5
Recent Projects and Major Clients 6
Acquisitions and Alliances 6
INPUT Assessment 8

Key Points

- Baan is one of the major European independent software vendors
- For 1996, Baan reported record earnings with net income up 138% on revenues that increased 80% year-on-year
- Baan targets the small to medium sized market with a launch of BAAN IV BackOffice in co-operation with Microsoft
- Baan Business Systems Limited is a new company that is formed to target the low end of the market
- The most recent acquisition is US-based Aurum Software – a deal worth $250 million.

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Company Description

Baan is a worldwide provider of Enterprise Resource Planning (ERP) software and consulting services. The company's main competitor is SAP AG.

The company was founded in 1978 in Ede, the Netherlands by Jan Baan who is the chief executive officer and chairman of Baan.

In 1993, Baan commenced a major investment program in North America and today operates from dual headquarters in Putten and in Menlo Park, California. Baan trades on both the Amsterdam Stock Exchange and Nasdaq.

Operations and Structure

Baan has direct or indirect sales and support organisations in 59 countries throughout the world.

The company has three linked Centres of Expertise in India, the Netherlands and the USA. These centres are responsible for the localisation of Baan's products which are available in more than 20 languages.

Baan has marketing and development partnerships with a large number of hardware, software and consulting companies (see "Acquisitions and Alliances" section).

In the middle of 1996, Baan announced plans to take its ERP software into small to medium sized companies. To support this move, the company formed a new company, Baan Business Systems Ltd, that will focus on this segment of the market while Baan Company will remain focused on large customers.

Exhibit 1 provides an overview of Baan's top management.

Exhibit 1

Baan's Corporate Management

Name	Position
Jan Baan	CEO and chairman
Tom Tinsley	President, COO
Jan Westerhoud	CFO
Amal Johnson	Executive VP, Baan Affiliates & Marketing
Karl-Heinz Voss	VP, EMEA Operations
Konrad Bank	President, Asia Pacific
Kevin Calderwood	President, Americas
Laurans van der Tang	Executive VP, R&D
Christine Pittman	VP, Global Consulting
Otto van der Tang	VP, Global Support
Gerrit van Munster	VP, Human Resources
Wim Heijting	Secretary, General Counsel

Source: Baan Company N.V.

The following is a list of Baan's target vertical markets:

- Aerospace and Defence
- Automotive
- Electronics
- Heavy Equipment & Contract Manufacturing
- Process Industries.

To support its vertical market solutions, Baan has established solution centres in the US and Europe (Germany and the Netherlands).

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Company Strategy

Baan's corporate strategy consists of six major points:

- simplify the complexity and reduce the risk of traditional ERP implementation
- expand global distribution, sales, services and support capabilities
- sustain leadership through focus on strategic vertical markets
- leverage third party implementation providers
- continually innovate products
- maintain Baan company values.

On a product level, what the company calls Dynamic Enterprise Modelling is core to Baan's strategy for the coming generations its ERP software. The company says that the philosophy of DEM is that companies should be able to implement continued business process improvement as opposed to "Big Bang" BPR and software implementation.

Baan also believes that DEM will enable it to take its ERP software to the small to medium-sized market. Central to this plan is also Baan's focus on the desktop and a strategic alliance with Microsoft. However, Baan has declared that it is still completely committed to Unix implementations.

Baan is also looking at adapting its software for Internet/Intranet technology. The company has aired an interest in network computers, although it has not fully declared its support for this technology.

In June 1996, Baan declared that it expected its annual revenues to grow to more than $1 billion by the end of the decade. The company's believes that making its software available for Microsoft NT is key to reach this goal. Baan expects 50% of its revenues from NT.

Financial Information

Exhibit 2 provides a summary of Baan´s financial results for the past five years.

Exhibit 2

Baan: Five-Year Financial Summary, 1992 to 1996, (FYE 31-12) ($ Millions)

Year	1992	1993	1994	1995	1996
Revenue	47	63	123	216	388
Annual Growth Rate	N/A	34%	95%	76%	79%
Net Income (Loss)	6.8	(2.1)	1.2	15.3	36.3
Net Income as % of Revenue	15%	N/A	1%	7.1%	9.4%
Number of Employees	N/A	796	943	1,525	2,389
Revenue per Employee	N/A	0.079	0.130	0.142	0.162

Source: Baan/ INPUT

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The fourth quarter of 1996 was the seventh consecutive quarter Baan reported growth. This quarter also produced record earnings at $15.8 million on turnover of $123.9 million.

Baan continued its strong growth for 1Q97 with revenues up 59% at $124 million year-on-year. Net income for the first quarter of this financial year was $12.3 million, up 184% over 1Q95. Research and development costs more than doubled to $42 million and now account for 11% of revenues.

Market Analysis

An analysis of Baan´s world-wide revenues by sales category is provided in Exhibit 3.

Hardware is non-core to Baan's activities and represents a diminishing part of the total turnover. In 1995, hardware and other services accounted for 11% of the total.

Baan operates its business in three main geographical areas, namely EMEA (Europe, Middle East and Africa), North America (USA and Canada) and the Rest of the World (Asia Pacific and Latin America).

Exhibit 3

Baan: Revenues by Category, 1996 ($ Millions)

Delivery Mode	Revenues in $ Millions	Share
Licenses	224.2	58%
Maintenance and Services	152.4	39%
Hardware and Other Revenues	11.3	3%
Total Revenue	388.0	100%

Source: Baan

Exhibit 4 shows Baan´s revenues by major operating region.

Exhibit 4

Baan: Revenues by Region, 1996 ($ Millions)

Region	Revenues in $ Millions	Share
Europe, Middle East Africa	188	48%
North America	147	38%
Rest of the World	53	14%
Total Revenues	388	100%

Source: Baan

An analysis of Baan´s European revenues by Industry Sector is provided in Exhibit 5.

Exhibit 6 shows Baan's European revenues by country.

Exhibit 5

Baan: European Revenues by Industry Sectors, 1996 ($ Millions)

Delivery Mode	Revenues in $ Millions	Share
Discrete Manufacturing	60	32%
Process Manufacturing	50	27%
Wholesale Distribution	28	15%
Other	50	27%
Total European Revenue	188	100%

Source: INPUT Estimates
Percentages are rounded

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Exhibit 6

Baan: European Revenues by Country, 1996 ($ Millions)

Country	Revenues in $ Millions	Share
The Netherlands	83	44%
Germany	54	29%
United Kingdom	18	10%
Other	33	17%
Total Revenues	188	100%

Source: Baan/ INPUT estimates

Key Products and Services

The Baan family of software products consists of BAAN Applications, Orgware and BAAN Tools. The company further offers a range of value-added services directly to selected end-user customers, including project management, product consultancy and technical support. For its wider customer base, Baan relies on partners to offer these services.

BAAN IV Applications are open system client/server solutions that operate on a range of different platforms. The range of applications support the whole business processes. The range includes:

- BAAN Manufacturing
- BAAN Project
- BAAN Distribution
- BAAN Transportation
- BAAN Finance
- BAAN Service

BAAN Orgware is a set of software tools and methodologies that the company has developed to assist customers and implementation partners in configuring, reconfiguring and implementing BAAN IV applications. Key modules in Orgware include:

- Enterprise Modeler
- Enterprise Performance Manager
- Enterprise Reference Models
- Enterprise Implementer

These modules are used for areas, such as selection and configuration of applications; business procedures and business objects; end user desktop configuration; data conversion; training plan generation; hardware and IT services configuration; plus project budgeting, planning and monitoring.

BAAN Tools are 4GL software tools that provide a fully featured development environment with facilities for documentation, translation, installation and maintenance of software.

Baan's applications have traditionally been implemented in Unix environments. However, in December 1996 the company announced that it had successfully shipped its BAAN IV BackOffice system which is an integration of BAAN IV with Microsoft BackOffice. This new product, which has support for Microsoft NT and Microsoft SQL server, is strategic for Baan's move into small to medium-sized companies.

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Recent Projects and Major Clients

At the end of the 1996 financial year, Baan had licensed around 3,500 system installations to over 2,200 customers worldwide. Customer sites now range from 4 to more than 4,000 users.

Recent projects include:

- Noranda Aluminum Inc. has selected Baan's process solution for its aluminium smelter operation
- Solectron Corporation, a global provider of electronics manufacturing services, was one of the first companies to install BAAN IV BackOffice.

Exhibit 7 shows some of Baan's major customers.

Acquisitions and Alliances

Baan's most recent acquisition is US-based Aurum Software. This deal , worth $250 million will provide Baan with customer relationship management software. The company will now be able to bridge sales, marketing, and customer service applications with ERP.

Exhibit 7

Baan: A Selection of Major Customers, 1996

Vertical Market	Customer
Electronics	Advanced Micro Devices
	Hitachi Ltd
	Nokia
	Northern Telecom Limited
Heavy Equipment	Asea Brown Boveri Group
	Philips Medical Systems B.V.
	Carrier Corporation
	EUCLID-HITACHI Heavy Equipment, Inc.
Process Industries	George Weston Foods
	Krupp Stahl
	Europe Carton
	Sonoco Products Company
Aerospace and Defence	British Aerospace Limited
	Lockheed Martin
	The Boeing Company
Automotive	Ford Motor Company
	Mercedes Benz US International
	Daf Trucks N.V.
	Fiat Auto Mains
Hybrid Manufacturing	Allied Signal Laminat Systems Inc.
	Eaton Technologies, Inc.
	Teknikon Furniture Systems

Source: Baan

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In November 1996 Baan acquired Antalys Inc., a vendor of a configuration application called Classys. The product, which Baan plans to integrate into BAAN IV, automates configuration and pricing for complex products and services. Antalys, which will operate as a subsidiary of Baan, will continue to offer a standalone configuration product.

In May 1996, Baan bought the Canadian company, Berclain Inc., for an undisclosed sum. Berclain is a

software firm specialising in invoice processing.

The use of partners is key to Baan's marketing strategy. The company has established a *Software Partners Program* for third-party software providers. The company's partners include:

- Antalys
- ADP-GSI
- BAIN
- Berclain
- Business Objects
- SQL Systems
- Sterling Commerce
- Wonderware

The company's Technology Partners include the following:

- Compaq
- Digital Equipment Corporation
- Hewlett Packard
- IBM
- Oracle
- Sequent
- Sun Microsystems

Baan has also developed strategic alliances with a number of consulting companies on local, international and global levels. Some of its major consulting partners include:

- Cap Gemini
- Ernst & Young
- IBM ISSC
- Price Waterhouse
- Andersen Consulting
- EDS
- Bull S.A.
- Perot Systems Corporation
- Origin

Baan further has strong alliances with Microsoft (see "Company Strategy" section). The company has also recently entered into an alliance with Hyperion Software that will see joint development and marketing efforts involving Baan's ERP software and Hyperion's financial applications.

INPUT Assessment

The past couple of years, Baan has been through a very positive development. The company has grown both revenues and profits strongly, while at the same time increasing its investment in research and development.

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One of Baan's strengths is its channel and partner strategy which provides it with good geographical coverage while minimizing its own costs for establishing operations in a large number of countries.

The company further shows the ability for short time-to-market of new products and strategies. One example is its recent launch of BAAN IV for NT and the desktop which is important for its ambitious plan to become a $1 billion company by the end of the decade.

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INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

February 1996

BACHMAN Information Systems, Inc.

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President & CEO: Peter J. Boni
8 New England Executive Park
Burlington, MA 01803
Phone: (617) 273-9003
Fax: (617) 229-9904

Status:	Public
Employees:	224 (2/96)
Revenue:	$33,322,000
Fiscal Year End:	6/30/95

Key Points

- BACHMAN Information Systems, Inc. (BACHMAN), provides database design and modeling products and services to enterprises worldwide for the development of platform-independent, business-critical applications.
- In December 1995, BACHMAN announced its intent to merge with Cadre Technologies Inc., establishing a new global supplier of modeling, database design and development solutions for commercial and technical markets. The merger is expected to be completed in March 1996.
- During the fourth quarter of fiscal 1995, BACHMAN completed the transition of its product set to the Windows environment. BACHMAN feels this brings the strength of its mainframe product to the growing client/server market.

Company Description

BACHMAN develops, markets and supports an integrated line of software development and maintenance business information systems.

- The company targets its products to Fortune 1000 companies, government agencies and organizations worldwide that use workstations, midrange and mainframe computers and relational database management systems for data-intensive applications.

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- As of June 30, 1995, BACHMAN had licensed more than 12,000 copies of its products to more than 1,000 customers worldwide across a variety of industries.

BACHMAN was founded in 1983 by Charles Bachman to develop and market computer-aided software engineering (CASE) products for the development and maintenance of business information systems. Prior to the introduction of its first products in the fourth quarter of fiscal 1988, BACHMAN's revenues were derived principally from consulting and other services.

On December 7, 1995 BACHMAN and the privately held Providence (RI)-based Cadre Technologies Inc. announced their intent to merge.

- The terms of the agreement call for BACHMAN to issue five million shares of its common stock in exchange for all outstanding shares of Cadre's capital stock in a pooling-of-interests transaction.

- Cadre is a object-oriented analysis and design solutions provider with more than 45,000 installations worldwide. Its key products include ObjectTeam for OMT, Teamwork, Teamwork for Ada, VantageTeam and Ensemble. Cadre, with approximately 250 employees, had revenue of $40.0 million for fiscal 1995.

- BACHMAN provides the IS channel that Cadre has sought and Cadre offers the object-oriented technology and market presence that BACHMAN and its customers have desired.

- The merged company plans to assume a new name to reflect its corporate mission to focus on delivering a suite of practical solutions for the design and development needs of software teams. BACHMAN's president and CEO, Peter J. Boni, will serve as president and CEO of the new Burlington (MA)-based company.

- The core competencies of this new company will include modeling, database design and development, objects and components, all backed by global services and support.

Organization and Structure

BACHMAN is currently headquartered in Burlington (MA) and has North American regional sales offices in Atlanta, Boston, Chicago, Dallas, Houston, New York, Rockville (WA), San Francisco and Toronto (Canada).

International subsidiaries are in Toronto (Canada); Paris (France); Wiesbaden (Germany); Florence, Milan, Rome and Turin (Italy); Singapore; and Bagshot Surrey (U.K.).

The company also has numerous distributors worldwide.

Company Strategy

BACHMAN's long term goals have been to make the transition from providing tools focused solely on mainframe application development to supporting customers' needs for a more open and flexible set of solutions aimed at the growing client/server market. Its plans are to enhance its product offerings through development efforts, strategic alliances and acquisitions.

In fiscal 1993, BACHMAN implemented a transition plan to penetrate the client/server marketplace.

- In fiscal 1995, BACHMAN introduced modeling solutions for the Windows environment, launched Windows and UNIX products for database design, application development, performance engineering and process and project management.

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- In fiscal 1996, the company is focusing on increasing sales to new and existing customers, pursuing and expanding alternate channels, complementary technology partnerships, and strategic alliances, while enhancing its products.

Financials

BACHMAN's fiscal 1995 revenue reached $33.3 million, a 9% decrease from fiscal 1994 revenue of $36.5 million. Net losses for the year were $10.3 million, compared to net losses of $11.5 million in fiscal 1994.

- Fiscal 1995 results include charges of $2.0 million related to restructuring efforts initiated in 1994 to streamline operations and better align expenses with revenue.
- Fiscal 1994 results include a one-time charge of $1.7 million for purchased research and development.

Product development expenses before capitalization of software development costs were $8.7 million (26% of revenue) in fiscal 1995, $10.8 million (30% of revenue) in fiscal 1994 and $7.3 million (16% of revenue) in fiscal 1993. The 19% decrease in expenses in fiscal 1995 reflected the completion of the company's product development and launch initiatives.

A five-year financial summary follows.

BACHMAN Information Systems, Inc.
Five-Year Financial Summary
($ Millions, except per share data)

	Fiscal Year				
Item	6/95	6/94	6/93	6/92	6/91
Revenue	$33.3	$36.5	$36.0	$48.0	$31.5
• Percent change from previous year	(9%)	1%	(25%)	52.3%	133%
Income (loss) before taxes	$(10.0)	$(11.2)	$(14.6)	$3.3	$2.9
• Percent change from previous year	(a) 11%	(b) 23%	(c) (542%)	14%	(181%)
Net income (loss)	$(10.3)	$(11.5)	$(14.7)	$2.8	$2.4
• Percent change from previous year	(30%)	(24%)	(625%)	17%	(167%)
Earnings (loss) per share	$(1.12)	$(1.30)	$(1.81)	$0.37	$0.35
• Percent change from previous year	14%	(28%)	(397%)	67%	(155%)

(a) Includes restructuring charges of $2.0 million.

(b) Includes a one-time charge of $1.7 million for purchased research and development.

(c) Includes restructuring charges of $6.3 million.

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Revenue Analysis by Product / Service

Approximately 34% of BACHMAN's fiscal 1995 revenue was derived from software licenses, 35% from associated maintenance services and the remaining 31% from consulting and education services.

- BACHMAN's software license revenue for fiscal 1995 was $11.3 million, a decrease of 29% from fiscal 1994 revenues of $15.8 million. This decline was due in part to decreases in revenue of $1.9 million and $2.1 million respectively for DB2/DBA and Analyst mainframe products worldwide.

- BACHMAN's declining mainframe-based revenue in fiscal 1995 was partially offset by $1 million in increased revenue from GroundWorks and Terrain, two of the company's new client/server products.

Maintenance revenue grew $0.9 million (25%) in the international markets in fiscal 1995, resulting from increased penetration of the markets and the greater proportion of renewed maintenance contracts. Maintenance revenue declined $0.9 million (12%) in the U.S. primarily due to the migration to client/server tools and fewer renewed maintenance contracts on mainframe-based tools.

Total consulting and education revenue in fiscal 1995 rose $1.4 million (15%) due to increased training and consulting services offered to customers of BACHMAN's international subsidiaries.

Its worldwide recurring revenue stream from services and support for all products grew 7% for fiscal 1995.

A three-year source of revenue summary follows:

BACHMAN Information Systems, Inc.
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	6/95		6/94		6/93	
Item	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Software Licenses	$11.3	34%	$15.8	43%	$18.3	51%
Maintenance	11.7	35%	11.7	32%	9.0	25%
Consulting and educational services	10.3	31%	9.0	25%	8.7	24%
Total	$33.3	100%	$36.5	100%	$36.0	100%

Interim Results

Total revenue for six months ending December 31, 1995 rose to $17.0 million, a 10% increase over $15.4 million for the same period in 1994. Net losses were $1.6 million, compared to net losses of $8.8 million for the same period a year ago.

- Software license revenues increased 63% over the same period in 1994.

- For the three months ending December 31, 1995, BACHMAN's client/server products accounted for 55% of North American

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software license revenues and 24% of worldwide software license revenue.

Market Financials

BACHMAN's products are used worldwide by the information systems departments of a range of business, government and nonprofit organizations.

BACHMAN has clients in the financial services, insurance, telecommunications and technology, utilities and natural resources, retail and consumer products, health care, manufacturing and engineering industries and government.

IBM was BACHMAN's single largest customer (as a distributor, system integrator and user of BACHMAN software) in each of fiscal 1995, 1994 and 1993.

Geographic Markets

Approximately 44% of BACHMAN's fiscal 1995 revenue was derived from the U.S., 29% from Italy and 27% from other international sources.

A three-year geographic source of revenue summary follows:

BACHMAN Information Systems, Inc.
Three-Year Geographic Source of Revenue Summary
($ Millions)

	Fiscal Year					
	6/95		6/94		6/93	
Geographic Market	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
U.S.	$14.7	44%	$17.7	48%	$21.6	60%
Italy	9.5	29%	7.9	22%	5.3	15%
Other international (a)	9.1	27%	10.9	30%	9.1	25%
Total	$33.3	100%	$36.5	100%	$36.0	100%

(a) Includes export sales from the U.S. of $803,000, $1.2 million and $1.8 million in fiscal 1995, fiscal 1994 and fiscal 1993, respectively.

Acquisitions

In November 1993, BACHMAN acquired Cooperative Solutions, Inc. (CSI) of San Jose (CA) for $2.2 million. The acquisition included CSI's product line and research and development efforts in the Ellipse® product.

In September 1993, BACHMAN acquired Chicago-based WindTunnel Software, Inc. in exchange for 650,000 shares of common stock valued at approximately $2.5 million. Included with the acquisition was the WindTunnel performance monitoring tool.

Employees

As of June 30, 1995, BACHMAN had 249 employees, a 20% reduction in staff from fiscal 1994.

The company currently has 224 employees worldwide.

Key Products and Services

BACHMAN's software products and services assist information systems specialists in modeling business requirements, designing and reengineering databases, developing and deploying applications, work group support,

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designing for performance, managing the application development process and leveraging legacy systems.

The suite of products and services provided by BACHMAN allow customers to chose from the range of application development tools on the market that best meet their needs.

BACHMAN offers products and services in each of the following solution areas:

Modeling the Business

BACHMAN offers the following Windows/OS/2-based tools used to model information systems:

- GroundWorks, released in May 1995, is a Windows-based business modeling software product that integrates data modeling, process modeling and object-oriented constructs such as entity methods and attribute derivations. It allows teams of analysts to work on subsets of a larger model and then integrate their work.

- BACHMAN/Analyst is a OS/2-based tool that integrates process and data models to streamline the modeling process.

Designing and Reengineering Databases

BACHMAN offers Windows and OS/2-based tools that allow design, implementation and maintenance of high-performance relational databases.

- Terrain, introduced October 1994, is BACHMAN's family of Windows database design tools that provide a scalable database design environment for business-critical client/server databases.

- TerrainMap integrates the modeling and database design capabilities of both GroundWorks and Terrain.

- BACHMAN/DBA is an OS/2-based tool that, when used in conjunction with BACHMAN/DDL Generator, allows the design of relational databases, and creation of data definitions for various relational databases, including DB2, DB2/6000, SYBASE SQL Server, Microsoft SQL Server, ORACLE, Ingres, INFORMIX, ADABAS and the OS/2 databases.

Developing and Deploying Applications

BACHMAN offers several products to be used when developing applications in a client/server environment:

- Ellipse®, released in October 1994, combines a visual development environment with a production system and integrated life cycle management. This allows organizations to build scaleable multiplatform client/server applications.

- BACHMAN/Generator for PowerBuilder is a Microsoft Windows productivity tool that enables users to pull information about data structures, allowed values and system processes in the Powersoft Corporation's PowerBuilder environment.

- Netron Inc.'s CAP/Link provides a link between BACHMAN/GroundWorks and Netron's multiplatform COBOL construction product, NETRON/CAP.

Work Group Products

- BACHMAN/Reports provides more than 100 standard Windows-based reports on BACHMAN GroundWorks model information and Terrain and BACHMAN/DBA design information.

- BACHMAN/Shared Work Manager is a work group modeling product that enables groups to interact by sharing models and integrating their results.

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Designing for Performance

- BACHMAN/WindTunnel, released in December 1994, is a Windows-based performance modeling and prediction tool for mainframe and client/server applications using DBMSs such as Sybase SQL Server and IBM's DB2/VMS. It provides a modeling method for designing performance into applications before they are operational, which can be employed to pinpoint performance sensitivities as early as the application analysis and design stages. The newest release of WindTunnel provides support for Sybase SQL Server applications.

Managing the Process

- Serveyor, released in April 1995, is an integrated process management workbench that stores system development life cycle methods and techniques, enabling project managers to define methods and techniques and manage development workgroup activities. Based on responses of a rule-based questionnaire, Serveyor creates a unique project methodology which contains only the set of tasks required to do the job.

Leveraging Legacy Systems

- BACHMAN/Business Rule Capture allows users to summarize the business logic and objects in legacy systems, and use that information to reengineer applications as they migrate from traditional host-based systems to distributed systems. It shortens the cycle for maintenance, system integration and new development.

- BACHMAN/Analyst Capture products allow the reengineering of IMS data structures to create an implementation-independent model where they can be reused in new relational database structures.

- BACHMAN/Production DBA provides an interface between BACHMAN's database modeling and design products, and BMC Software's CHANGE MANAGER, a mainframe-based product which coordinates data structure changes among multiple DB2 subsystems.

Services

Customer Support and Software Maintenance

BACHMAN offers maintenance support via a telephone "hot line". Software maintenance and support are generally provided without extra charge for ninety days following the initial licensing of a product, after which annual contracts are available.

Training and Consulting

BACHMAN provides conceptual and product-oriented training courses for customers at education facilities in the U.S. in Atlanta, Burlington (MA), Chicago, New York City, and Rockville (MD). Training is also provided at facilities in Toronto (Canada), Boulogne-Billancourt (France) Turin (Italy), Wiesbaden (Germany) and Surrey (England). Custom courses are available for delivery at customer sites as well.

Clients

BACHMAN's products are used worldwide by information systems specialists with data-intensive applications, in a wide range of business, government, and non-profit organizations.

As of June, 1995, BACHMAN had more than 12,000 license installations at more than 1,000 customer sites worldwide. Its customer base includes Mobil, Proctor & Gamble, Prudential, Martin Marietta, UPS, Chase Manhattan, Allmerica and Barclays Bank.

Marketing and Sales

BACHMAN markets its products to Fortune 1000 companies, government agencies, and organizations worldwide that use computers

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and software for data-intensive and transaction-intensive applications.

BACHMAN markets its products through a direct sales force in the U.S. and through wholly-owned subsidiaries in Canada, Germany, France, Italy, Singapore and the UK. Distributors, agents and other resellers market BACHMAN's products in more than 30 other countries.

Traditionally, BACHMAN relied heavily on IBM for development and marketing of its products. This relationship was terminated in 1993 to allow BACHMAN to increase its multiple platform support. As a system integrator, distributor and an end user, IBM was BACHMAN's single largest customer in fiscal 1995, 1994, and 1993, accounting for 20%, 13% and 16% of BACHMAN's total revenue, respectively.

In conjunction with its expansion into the client/server development marketplace, BACHMAN intends to promote distribution through alternate channels worldwide, such as system integrators, and value-added resellers (VARs) like Seer Technologies, Inc.

BACHMAN has international distributors in Argentina, Belgium, Brazil, Columbia, Denmark, Finland, Israel, Japan, Norway, Peru, South Africa, Spain, Sweden, Turkey and Venezuela. Approximately 4% of fiscal 1995 revenue came from sales made to independent international distributors.

Alliances

In accordance with its transition into the client/server marketplace, BACHMAN has formed various partnerships and marketing alliances.

- BACHMAN joined Sybase, Inc.'s Warehouse Works™ Alliance Program in August 1995 to provide customers integration with Sybase's Warehouse Works, maintain compatibility with Sybase data warehouse offerings and participate in joint marketing activities.
- In fiscal 1995, BACHMAN and Netron, Inc. entered into joint marketing activities involving Netron's CAP/Link, which links BACHMAN/GroundWorks and Netron/CAP.
- During the first quarter of fiscal 1996, BACHMAN and Seer Technologies announced a joint worldwide development and distribution agreement that will integrate BACHMAN's modeling and database design tools with the Seer*HPS solution for large-scale client/server development.

Competition

BACHMAN's main competitors in the modeling and database design market include Logic Works, Inc., Intersolv, Inc. and Texas Instruments.

In business-critical client/server application development, competitors include Dynasty Technologies, Inc. and Forte, Inc., offering competitive solutions to BACHMAN's Ellipse.

In the process management market, LBMS, Inc. serves similar needs to BACHMAN's Serveyor.

WindTunnel competes with simulation provided by Scientific and Engineering Software, Inc.

INPUT Assessment

BACHMAN's strengths include:

- A large and loyal customer base
- Its recognition as a leader in the mainframe CASE tools market

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- Technological synergies that will result from the upcoming merger with Cadre

Challenges over the coming year include:

- Maintaining profitability
- Leveraging BACHMAN's recognized leadership position to the client/server market
- Successfully integrating with the operations of Cadre

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INPUT

COMPANY
PROFILE

BARRISTER INFORMATION SYSTEMS CORPORATION
465 Main Street
Buffalo, NY 14203
Phone: (716) 845-5010
Fax: (716) 845-5033

Chairman, President, and CEO:	Henry P. Semmelhack
Status:	Public Corporation
Stock Exchange:	AMEX
Total Employees:	213 (Full-time)
Total Revenue:	$16,165,000
Fiscal Year End:	3/31/93

Key Points

- Barrister has made the transition from offering proprietary hardware to selling and installing industry standard products, such as PCs, LANs, and AS/400s for its legal systems.
- In October 1992, Barrister launched Javelan™, the first Windows-based financial management software package for law firms that operates with client/server technology.
- The company has expanded its hardware maintenance services to law firms and other clients to include on-site as well as depot repair services. During fiscal 1993, a new sales staff was organized and dedicated to expanding revenues in this area.

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Company Description

Barrister Information Systems Corporation markets, and supports integrated turnkey systems and associated support services for the legal profession. The company currently markets PC, Windows, LAN, and AS/400-based systems.

Barrister also provides on-site and depot repair equipment maintenance services outside the legal market.

Strategy

The company's plans for fiscal 1994 call for growth in revenue from products and services and a return to modest profitability.

- Additional salespeople were hired during fiscal 1993 to improve service sales to existing customers as well as to prospects outside the company's traditional line of business.
- It is expected that the Javelan product will contribute to increased sales.
- Barrister is also positioning itself as an outsourcing contractor for hardware maintenance services. During 1993, Barrister received a major contract award from a Fortune 100 company.

Financials

Barrister's fiscal 1993 revenue was $16.2 million, a 6% decrease from fiscal 1992 revenue of $17.2 million. Net losses were $62,000, compared to net losses of $2.2 million for fiscal 1992. A five-year financial summary follows:

BARRISTER INFORMATION SYSTEMS CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

	FISCAL YEAR				
ITEM	3/93	3/92	3/91	3/90	3/89
Revenue	$16,165	$17,154	$24,805	$29,147	$31,877
· Percent change from previous year	(6%)	(30%)	(15%)	(9%)	(16%)
Net income (loss)	$(62)	$(2,180) (a)	$(8,152) (a)	$(6,492)	$(6,595)
· Percent change from previous year	97%	73%	(19%)	2%	N/A
Earnings (loss) per share	$(0.14)	$(1.92)	$(15.98)	$(12.75)	$(12.98)
· Percent change from previous year	93%	88%	(25%)	2%	N/A

(a) Includes restructuring charges of $454,000 in fiscal 1992 and $4.7 million in fiscal 1991.

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Barrister management attributes fiscal 1993 results to the following:

- Product sales grew 11% during fiscal 1993 as a result of increased sales to customers outside the legal market. However, margins decreased because a larger percentage of revenue came from the sale of PC and network products with inherently low margins.

- Service revenues declined 11% during fiscal 1993 due primarily to clients transitioning to PCs and LANs from Barrister's proprietary products. As a result, an increased percent of service revenue came from the maintenance of PC and LAN-based products.

Product development and engineering expenditures were $994,000 (6% of revenue) in fiscal 1993, $2.0 million (12% of revenue) in fiscal 1992, and $2.9 million (12% of revenue) in fiscal 1991.

Revenue for the quarter ending July 2, 1993 reached $4.4 million, a 7% increase over $4.1 million for the same period in 1992. Net losses were $84,000, compared to losses of $2,000 for the same period a year ago.

- Product revenues increased 14% and service revenue increased nearly 5%.

- Losses were due to lower margins on sales in an extremely competitive market.

Market Financials

Barrister derives the majority of its revenue from the legal industry. The company has also installed its systems in state and local government offices and provides equipment maintenance services to other markets.

Approximately 28% of Barrister's fiscal 1993 revenue was derived from new turnkey systems sales and add-on sales of hardware and software to existing clients. The remaining 72% was derived from support services associated with the installation, implementation, and maintenance of its systems and equipment maintenance services provided outside the legal market.

A three-year summary of source of revenue as provided by Barrister follows:

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BARRISTER INFORMATION SYSTEMS CORPORATION
THREE-YEAR SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	3/93		3/92		3/91	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
Product sales	$4.6	28%	$4.1	24%	$9.2	38%
Services	11.6	72%	13.1	76%	15.2	62%
TOTAL	**$16.2**	**100%**	**$17.2**	**100%**	**$24.4**	**100%**

Geographic Markets

Virtually all of Barrister's fiscal 1993 revenue was derived from the U.S.

Barrister maintains offices in Atlanta and Tampa (GA); Braintree (MA); Cherry Hill (NJ); Chicago (IL); Cleveland (OH); Dallas (TX); Denver (CO); Detroit (MI); Eagen (MI); Hartford (CT); Los Angeles and San Diego (CA); Miami (FL); New York City (NY); Pittsburgh (PA); and Richmond and Arlington (VA).

Employees

As of June 1993, Barrister had 213 full-time and 11 part-time employees.

Key Products and Services

Barrister offers turnkey systems and associated support services and hardware maintenance services.

Turnkey Systems:

Barrister markets and supports integrated minicomputer and microcomputer-based turnkey systems for use by the legal profession. The company has installed more than 3,500 systems in private and public sector client sites throughout the U.S. and Canada.

Current products include the following:

- Javelan is a Windows-based time and billing, accounting, and accounts payable system for medium and large law firms. This on-line, interactive system operates on PCs in a local-area network with DEC servers containing the law firm's data base.

- Barrister/Eagle is a IBM AS/400-based system for medium law firms. Applications supported include time and billing, cost

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recovery, conflict of interest checking, general ledger, budgeting, accounts payable, accounts receivable, check writing, trust accounting, payroll, and financial statements.

- TimeManager™ is a time and billing, accounting, and accounts payable system for smaller law firms that runs in DOS and Novell environments.

Other software available from Barrister includes:

- Conflict of interest checking software
- Docket and calendar software
- BridgeNet, which permits Barrister minicomputers to communicate with PC LANs.
- Word processing, legal case management, data base management packages, electronic spreadsheets, and other commercially available MS-DOS programs run on Barrister's microcomputer-based systems.

Barrister no longer markets, but continues to support its Advanced Law Firm Management System (ALFMS) which is based on proprietary minicomputers. It is anticipated that most of these clients will migrate to PC and LAN-based systems.

Support Services:

Maintenance and support services available to turnkey system clients include hardware and software installation, LAN design and installation, training, full service equipment maintenance, extended maintenance contracts, software program subscription service, hotline service, and on-site service.

Barrister Litigation Support Services include on-line processing services, case requirement analysis, data base design, document cataloging, indexing, abstracting and coding, data input, and data base maintenance.

Consulting and applications support is offered in the areas of litigation support, data base management, telecommunications, financial management, word processing, distributed automation, and needs assessment.

Barrister also provides a facilities management service for customers involved in relocation of their data centers or offices.

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Equipment maintenance services are available to turnkey clients and to others outside the legal market. A depot repair facility is located in Buffalo.

Marketing and Sales

Barrister has a direct sales force to market its products and services.

Alliances

Barrister is a remarketer of IBM AS/400 computers and IBM microcomputers.

Barrister is a remarketer of DEC personal computers, files servers, and services.

Barrister is a Solutions Channel provider for Microsoft. This relationship provides Barrister leads for NT system installs and other cooperative marketing arrangements.

Clients

Barrister clients include approximately 14% of the 250 largest private law firms in the U.S.

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COMPANY PROFILE

BDM HOLDINGS, INC.
7915 Jones Branch Drive
McLean, VA 22102
(703) 848-5000

Frank C. Carlucci, Chairman
Philip A. Odeen, President and CEO
Total Employees: 4,500 (7/92)
Total Revenue, Fiscal Year End
12/31/91: $296,798,000*

*Prior to Vinnell acquisition

The Company

BDM Holdings, Inc., through its principal operating companies--BDM International, Inc. and Vinnell Corporation--provides professional and technical services, including a range of information systems and systems services (integration, engineering, and design) to clients in defense, civil government, manufacturing, business and finance, and other public and private sector organizations in the U.S. and abroad.

- BDM, established in 1960, operated as a public corporation from 1980 through July 1988, when it was acquired by Ford Motor Company to operate as a separate professional services subsidiary of Ford Aerospace Corporation.

- In early 1990, Ford announced its intention to sell all of Ford Aerospace, at which point BDM sought to be spun off separately.

- In October 1990, BDM Holdings was formed by an investor group organized by The Carlyle Group, L.P. for the purpose of acquiring, together with the senior management of BDM, the ongoing business of BDM International. The total purchase price was approximately $126.5 million. Most of the remaining business of Ford Aerospace was acquired by Loral Aerospace Corporation.

- During 1991, BDM common stock was made available for a limited time to company employees. Currently BDM is owned in part by these employees, as well as by senior BDM management, Carlyle, and certain other investors.

- In March 1992, BDM acquired Vinnell Corporation of Fairfax (VA).

  - Vinnell is a $100 million professional and technical services company with approximately 1,700 employees that provides training and operations and maintenance services to a variety of U.S. and foreign government agencies.

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- Vinnell and BDM will operate as separate, sister companies with no planned integration of organizations, structures, or operations.

BDM's current strategy is to re-establish the company's pattern of growth evidenced during the 1970s and 1980s through:

- Building on basics while responding to change
- Quality service to long-time clients
- Winning major, long-term contracts in new markets
- Identifying and developing new markets
- Strategic alliances and investments

BDM's 1991 revenue (prior to the Vinnell acquisition) reached $296.8 million and net income was $520,000. In the summary that follows, financials for 1990 have been segmented to show BDM's operations as a subsidiary of Ford (January through September 1990) and as an independent company (October through December 1990).

BDM
FINANCIAL SUMMARY
($ millions)

	FISCAL PERIOD			
ITEM	1991	10/1/90-12/31/90	1/1/90-9/30/90	1989
Revenue	$296.8	$74.0	$232.2	$355.9
Gross profit	$23.3	$6.1	$14.2	$28.1
Net income (loss)	$0.5	$0.3	$(4.3)	$8.2
Earnings (loss) per share	$0.05	$0.04	--	--

Revenue for 1991 decreased 3% ($9.5 million) compared with 1990 due primarily to a reduction of hardware purchases by clients and less use of subcontractors.

- While revenues declined, the company's business mix has shifted to non-DoD markets. As a percentage of total revenue, DoD revenues declined from approximately 73% for 1990 to approximately 67% during 1991. The increases in other client

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revenues are due primarily to new contracts with other federal government agencies such as NASA and the Department of Energy.

- Revenue from cost-plus-fee (CPF) contracts increased nearly 3% ($5.1 million), while revenue from fixed-price (FP) and time-and-materials (T&M) contracts decreased by over 7% ($7.5 million) and 26% ($7.1 million), respectively, during 1991.

As of December 31, 1991, BDM had 2,600 employees. The company currently has 4,500 employees, including those acquired with Vinnell in March 1992.

Key Products and Services

INPUT estimates that BDM's 1991 U.S. information services revenue was approximately $225 million, segmented as follows:

Professional services	50%
Systems integration	50%
	100%

During 1991, BDM worked on 800 different contracts, many of which involved multiple services and tasks.

BDM provides professional and technical services, under contract, to clients in defense, communications, logistics, energy, the environment, space, transportation, manufacturing, product distribution, and public policy.

- BDM applies its expertise in systems engineering and development (including systems architecture, design, and integration) to meet the requirements for information and data systems, advanced manufacturing systems, and communications networks and systems--and their combinations.

- BDM applies advanced technology to solve problems and improve operational and systems performance and effectiveness. The company's technology base includes methods and procedures (modeling, simulation, planning, and analysis tools) and systems methodologies (software productivity, computer-integrated manufacturing, concurrent design, and manufacturing), as well as artificial intelligence, advanced computing, image processing, microelectronics, sensors, photonics, lasers and optics, artificial neural systems, intelligent processing of materials, robotics, and other areas.

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- In addition to systems development work, BDM performs a range of analyses, assessments, and research to support planners, strategists, policymakers, and program managers in government and industry.

- BDM also supports test and evaluation of weapons, communications, and other systems.

Examples of contracts, by application area, include the following:

Information and Communications:

Federal and National Information Systems:

- Under an eight-year, $70 million contract with the Securities and Exchange Commission (SEC), BDM is developing and integrating the Electronic Data Gathering, Analysis, and Retrieval (EDGAR) system. When completed, EDGAR will serve approximately 15,000 public companies.

- BDM continues to provide information resource management support to the Department of Veterans Affairs, ranging from cost-benefit analyses to information systems planning.

- BDM, as engineering support contractor, designed a complex, multimedia communications system to tie together the facilities of the Federal Aviation Administration's (FAA) National Airspace System. Also for the FAA, BDM began design of the Data Multiplexing Network and the Low Density Radio Communications Link and addressed the assignment of channel segments.

- BDM continues the development of a system to link the information systems of government agencies and others involved with the Strategic Defense Initiative (SDI).

- BDM designed and developed an optical disk-based information system to store all the personnel records and files for the U.S. Army Enlisted Records and Evaluation Center.

- During 1991, BDM completed the rehosting of the computer-based system that processes millions of DoD security clearance records.

- BDM developed a five-year plan for electronic messaging for The World Bank.

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State Government Systems:

- BDM designed, developed, and implemented the Family Assistance Management Information System (FAMIS) in Montana and is providing child support enforcement (CSE) systems and services to this state.

- BDM also continued and expanded similar efforts for the State of New Mexico's Human Services Department. Since 1988, BDM has assisted New Mexico in developing an electronic benefits transfer program.

Command and Control:

- BDM has provided computational and communications automation in support of a new mobile command center called the Enhanced Crisis Management Capability for the joint Defense Nuclear Agency (DNA)/Defense Communications Agency (DCA)/U.S. Pacific Command program.

- During 1991, BDM continued its support as systems integrator for the Army Operations Center upgrade project.

- Since 1985, BDM has supported the U.S. Air Force Operations Support Center in the Pentagon.

- BDM is providing test and integration support for the development of the All Source Analysis System; developing and testing software for the U.S. Army's Maneuver Control System; and providing support services to the Joint Tactical Command, Control, and Communications Agency.

Emergency Response: BDM continued to aid the Army, Air Force, and Federal Emergency Management Agency (FEMA) in the design, conduct, and evaluation of exercises based on the potential occurrence of natural and technological catastrophic events.

National Security:

Advanced Concepts and Applications:

- As a participant in the Defense Advanced Research Projects Agency's (DARPA) Transition of Optical Processors to Systems (TOPS) optical computing program, BDM began development of a new signal processor for tri-service use in an advanced imaging radar.

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- BDM is supporting DARPA's infrared technology program, the CELS II (Control Electronic Laboratory Support) effort, and the test mission aboard the Air Force/Boeing NC-135A ARGUS aircraft.

Strategic, Theater, and Tactical Defense:

- During 1991, BDM assisted in the implementation of the Global Protection Against Limited Strikes (GPALS) system.

- BDM has provided systems engineering and assistance under the Combined Allied Defense Effort for the U.S. Army Strategic Defense Command.

- BDM has provided independent evaluations of "smart weapons" technologies, prototyping for an Identification Friend or Foe beacon, and assessing of guidance and control of tactical weapons.

Design Engineering: For the U.S. Air Force Ogden Air Logistics Center, BDM is developing various systems to increase the reliability and maintainability of a range of Air Force weapon systems.

Systems Analysis, Engineering, and Integration:

- BDM continues the Threat Related Attrition and Wartime Medical systems development work begun in 1985.

- BDM has applied combat simulation capabilities in the Value Added Analysis program for an Army agency chartered to identify cost-effective new weapon systems.

- BDM performed a major combat effectiveness analysis to support Air Force concept formation of its new multirole fighter, including potential post-Soviet scenarios.

- BDM completed two large contracts related to system security for high-value items.

Intelligence Community Support:

- During 1991, BDM won multiple contracts for systems engineering, software development and support, logistics, and training to U.S. intelligence organizations.

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- BDM automated text analysis using artificial intelligence methods and continued support in the areas of threat analyses, models and data bases, handbooks, and imagery analysis.

- BDM assisted in the development, test, and evaluation of image understanding techniques and automated systems to support interpretation of aerial photographs.

Test and Evaluation and Training:

- During 1991, BDM expanded its support to the Army Operational Test and Evaluation Command and began supporting the Joint Interoperability Test Center.

- BDM continues to support the Joint Readiness Training Center with a new five-year program.

- BDM continued its operations and test support at the U.S. Air Force TRESTLE facility in New Mexico.

- During 1991, BDM won a five-year contract with the Office of Personnel Management to provide training services and work force productivity support to non-DoD agencies.

- BDM continued test planning, execution, analysis, and training support to users of the U.S. Air Force Theater Air Command and Control Simulation Facility.

Arms Control/Verification:

- BDM has performed development, system engineering, and integration of unique identifiers known as Tags for treaty-limited items under the Tagging RDT&E program.

- BDM is also working on the Compliance Monitoring and Tracking System program, a four-year contract awarded by the Defense Nuclear Agency.

- BDM is developing procedures to be used in the inspection of government and private facilities.

Defense Policy and Programs:

- BDM continued to conduct military force assessments, trends analysis, and conflict simulations for the Office of the Secretary of Defense.

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- In support of the Office of the Joint Chiefs of Staff, BDM contributed to a series of multinational joint simulation conferences involving defense ministry representatives of Great Britain, Germany, France, Italy, the U.S., and the former Soviet Union.

Transportation, Distribution, and Logistics:

Transportation Analysis and Systems:

- BDM was awarded a four-year contract to design and install an operations control center to provide the Washington Metropolitan Area Transit Authority with capabilities to monitor, supervise, and control rail, maintenance, security, and passenger operations.

- BDM completed development of GRIDLOCK, a traffic flow model.

- For the FAA, BDM is supporting the Volpe National Transportation System Center's telecommunications management and operations. BDM is also developing an information model for the Army and is supporting the INTRANSIT System with systems integration, mapping data bases, over-the-horizon tracking, computer security, counter-narcotics, and satellite support.

Advanced Warehousing and Distribution:

- BDM is the system integrator for automated warehousing and distribution systems for both Bell Canada and Ciba Geigy.

- BDM has a strategic alliance with Alpha & Omega Integrated Control Systems, a warehouse distribution system vendor.

Logistics Systems and Services:

- Since 1984, BDM has worked on the Requirements Data Bank (RDB) program of the U.S. Air Force Logistics Command, which helps plan and track total Air Force purchase, maintenance, and repair requirements for over one million items. In 1991, BDM continued automating the process of managing Air Force logistics requirements and spare parts.

- In support of the U.S. Army's logistics modernization program, BDM is determining base requirements in transportation and other areas.

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- Under the Pacer Frontier program, BDM contributed to enhancing the logistics support infrastructure for the Air Force Logistics Command in support of the Space Command located near Colorado Springs.

Air Traffic Control and Airspace Management:

- During 1991, under the Peace Panorama program, BDM was chosen by the U.S. government to assist in developing an airspace surveillance system for Colombian airspace.

- BDM is defining and evaluating an air traffic control system for the FAA that is functionally equivalent to the currently installed Terminal Radar Approach Control systems.

- BDM has developed a proprietary air traffic control system that can operate as a standalone system or be fully integrated into National Airspace System operations.

Airport Security: BDM provided security engineering services to the Detroit Metropolitan/Wayne County airport, completing the design of an automated access control system for the air operations area.

Energy and Environment:

Waste Management and Environmental Restoration: BDM is providing technical and other support for waste minimization and remediation to the U.S. Department of Energy.

Fossil Energy Development: BDM has designed and completed horizontal drilled wells and developed new geostatistical oil and gas exploration methods.

Advanced Energy Production: BDM has supported research and development efforts for the U.S. Navy on the Pacific Mid-Ocean Ridge and developed prototype generators for electrical power.

Space Science Applications:

During 1991, BDM was selected by NASA to provide engineering, scientific, and program support for the Earth Observing System.

BDM also won a recompetition of NASA's Astrophysics Division support contract on the Great Observatories program.

BDM also continued its support of the Space Station Freedom program.

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Business and Industrial Services:

Strategic Planning:

- BDM has performed strategic information systems planning for a major domestic auto manufacturer's electronics division.

- BDM defined emerging markets for a subsidiary of a top 20 DoD contractor and proposed corporate strategic and tactical responses to help increase market share.

Advanced Manufacturing:

- BDM's work on the SEMATECH Semiconductor Generic Manufacturing Model was expanded to include development of next-generation Distributed Factory System prototypes and a survey of state-of-the-industry wafer fabrication equipment controllers.

- BDM supports modernization initiatives in the areas of enterprise integration technology, concurrent engineering, information resources management, and the application of systems development methodology and product life cycles to support systems and software development programs. This work includes enterprise analysis, systems development projects, technology transfer, tutorials, and training seminars for manufacturing firms.

- For several large clients, BDM completed the design, development, and installation of automated production line equipment and customized control system software and provided related training and long-term maintenance.

- BDM supports DARPA's Intelligent Processing of Materials (IPM) program.

Information and Telecommunications Systems:

- BDM analyzed the material supply system for a manufacturer and developed recommendations for enhancing system maintainability.

- During 1991, BDM began providing professional services to law firms, corporate and government legal departments, and state, local, and federal judiciary systems. BDM was selected to provide program management expertise to a systems integration project for one of the country's largest law firms.

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- BDM has completed a planning study for the World Bank regarding a future electronic communications environment with integrated voice, image, graphic, and textual data.

International Program:

Under a multi-year contract with the Japan Transport Economic Research Center, BDM performed econometric modeling and analysis of developments in the U.S. transportation market.

BDM supported Kuwait in the development and management of the Kuwaiti Student Augmentation Program.

BDM's ten-year logistics and systems engineering support to the Royal Saudi Air Force was expanded in 1991, increasing BDM personnel support in information technologies, logistics, intelligence, training, and other areas.

Under a partnership between BDM and Mitsui Engineering and Shipbuilding Co., the Rio Grande Development Company was formed to search for, evaluate, and nurture new technologies for commercial development in the U.S. and eventually global markets.

Industry Markets

Approximately 90% of BDM's 1991 revenue was derived from the U.S. government, including subcontracts (67% from the DoD and 23% from other government agencies), 3% from foreign government clients (including services to foreign governments through the U.S. government), and 7% from commercial and other clients.

Geographic Markets

Approximately 97% of BDM's revenue is from the U.S. and 3% from international sources.

BDM's markets, which are largely in the continental U.S., are served through a network of operations centers, site facilities within or near client operations, and other offices supporting regional and local client bases.

- The largest BDM operations are located in McLean (VA); Albuquerque (NM), Columbia (MD), Dayton (OH), Germantown (MD), and Huntsville (AL).

- BDM has an additional 45 offices worldwide.

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Computer Hardware and Software

A range of mainframe, minicomputer, and microcomputer systems, networks, and workstations assist BDM in providing professional services and support to its clients.

- Large-scale DEC VAX and IBM systems are located at several major BDM sites, networked and accessed through a variety of leased lines and dial-up links. Remote access is provided via terminal or microcomputer.

- All IBM and VAX software systems and communications are supported by BDM systems analysts and communications specialists.

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INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

May 1996

Bell Atlantic Corporation

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Chairman & CEO: Raymond W. Smith
Vice Chairman: Lawrence T. Babbio, Jr.
Vice Chairman: James G. Cullen
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Philadelphia, PA 19103
Phone: (215) 963-6000

Investor Relations
Phone: (215) 963-6333
Fax: (215) 963-6470
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Bell Atlantic

Status:	Public
Employees:	61,766 (12/95)
Revenue:	$13,429,500,000
Fiscal Year End:	12/31/95

Key Points

- In April 1996, Bell Atlantic and NYNEX announced a definitive agreement to merge, creating the nation's second largest telecommunications company.
- In July 1995, Bell Atlantic and NYNEX completed the combination of their domestic cellular and paging businesses and formed a partnership, Bell Atlantic NYNEX Mobile.
- Bell Atlantic is a partner in national alliances that will offer wireless communications, as well as video and interactive programming.
- Bell Atlantic also has substantial holdings and operations in international markets and provides services for customer-based information technology.
- During 1995, the company formed a separate long-distance business unit—Bell

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Atlantic Communications, Inc.—to pursue new market opportunities enabled by the Telecommunications Act of 1996.

- Bell Atlantic Internet Solutions is a new unit of Bell Atlantic formed in March 1996 to develop and deliver Internet-based services to consumers, business, and government.

- In the fourth quarter of 1995, Bell Atlantic sold its Bell Atlantic Business Systems Services computer maintenance business to Decision Servcom.

Company Description

Bell Atlantic is one of the seven regional holding companies formed on January 1, 1984 when AT&T divested itself of its exchange telecommunications, exchange access, printed directory, advertising portions of telephone company subsidiaries, and cellular mobile communications businesses.

Bell Atlantic is a diversified telecommunications company that provides voice and data services in the mid-Atlantic region and is a partner in providing wireless communications domestically on the East Coast and parts of the Southeast and Southwest and globally in Mexico, Italy, and the Czech and Slovak Republics.

- The company provides a range of local exchange telecommunications in New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, and Washington, D.C. The company is developing a variety of new products, including video, entertainment, and information services.

- Bell Atlantic owns an approximate 63% interest in Bell Atlantic NYNEX Mobile, one of the nation's largest cellular carriers, and has an ownership position in cellular companies internationally.

- Other services include network/systems integration, professional services, and customer premises equipment distribution.

In April 1996, Bell Atlantic and NYNEX announced that their boards of directors had unanimously approved a definitive agreement for a merger of equals between the two corporations with a combined market value in excess of $50 billion.

- The merger will create the nation's second largest telecommunications company, with 133,000 employees, 1995 pro forma revenue of $27.8 billion (including unconsolidated wireless) and earnings of $3.1 billion (after adjustments for special items).

- The new company, to be named Bell Atlantic, will provide telecommunications, entertainment, and information services to 26 million customers in 13 northeastern and middle Atlantic states and the District of Columbia, as well as to customers throughout the nation and the world. The new company will also be one of the world's largest providers of wireless communications, serving 3.6 million customers.

- The corporate headquarters for the new Bell Atlantic will be in New York, with significant operations in Boston, Philadelphia, and Arlington (VA).

- Under the terms of the agreement, NYNEX shareholders will receive one share in the new company for each NYNEX share owned and Bell Atlantic shareholders will receive 1.302 shares in the new company for each Bell Atlantic share owned.

- The transaction is expected to be accounted for as a pooling of interests and to be tax-free to both companies' shareholders. Closing is expected within 12 months.

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- The board of directors of the new company will consist of an equal number of members from each company's board.

Organization and Structure

Subsequent to the merger of Bell Atlantic and NYNEX, key officers and business heads will include the following:

- Raymond W. Smith, chairman and CEO of Bell Atlantic, will be the chairman and CEO of the new company.

- Ivan G. Seidenberg, chairman and CEO of NYNEX, will be vice chairman, president, and chief operating officer. Approximately one year after the closing of the merger, Mr. Seidenberg will become CEO of the new company and chairman upon Mr. Smith's retirement.

- Frederic V. Salerno, currently vice chairman, Finance and Business Development of NYNEX, will be chief financial officer and executive vice president, Finance and Corporate Development.

- Lawrence T. Babbio, Jr., currently vice chairman of Bell Atlantic, will be president and CEO of Wireless & Global Enterprises.

- James G. Cullen, currently vice chairman of Bell Atlantic, will be president and CEO of the Telecom Group.

- Richard A. Jalkut, currently president and group executive of NYNEX, will be president and CEO of Network Services.

The new company will organize along customer and service lines dedicated to the consumer, large and small business, network integration, long-distance, federal systems, video, and Internet segments, among others.

A proposed post-closing organization structure is shown in Exhibit A.

Bell Atlantic Corporation's current organization is outlined in Exhibit B on the following page.

Network Services provides telecommunications services through seven operating companies. Lines of business include the following:

- Consumer Services, contributing 33% ($4 billion) to 1995 Network Services revenue, markets communications services to residential customers within its territory (nearly 11.5 million households and 29 million people) and plans to market information services and entertainment programming.

- Carrier Services, contributing 21% ($2.6 billion) to 1995 Network Services revenue, markets switched and special access to the Network Services companies' local exchange networks and billing and collection services, including recording, rating, bill processing, and bill rendering. Approximately 93% of Carrier Services' revenue comes from interexchange carriers; AT&T is the largest single customer. Most of the remaining revenue comes from business customers and government agencies with their own special access network connections, wireless companies, and other local exchange carriers that resell network connections to their own customers.

- Small Business Services, contributing 15% ($1.8 billion) to 1995 Network Services' revenue, markets communications and information services to small businesses (customers having up to 20 access lines). This line of business has approximately 1.2 million small business customers in its territory.

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Exhibit A
Proposed Post-Closing Bell Atlantic Organization

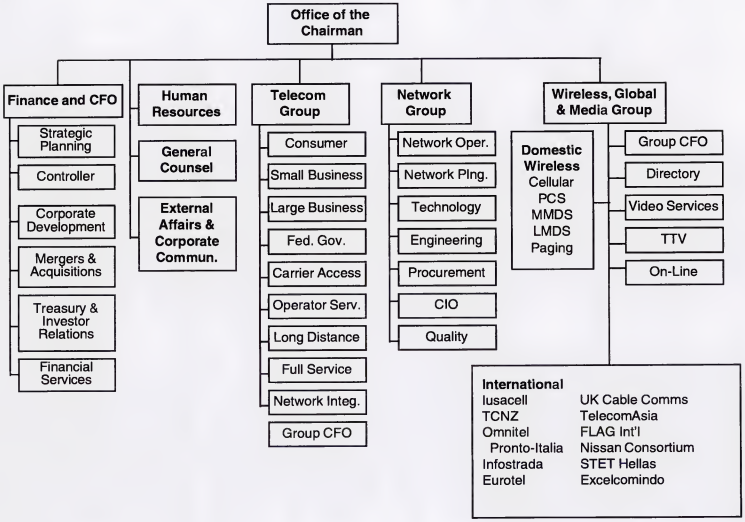

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Exhibit B
Bell Atlantic Corporation
Current Organizational Structure

Unit	Lines of Business	Companies
Communications—Network Services	Consumer Services	Bell Atlantic—New Jersey
	Small Business Services	Bell Atlantic—Pennsylvania
	Large Business Services	Bell Atlantic—Delaware
	Carrier Services	Bell Atlantic—Maryland
	Directory Services	Bell Atlantic—Virginia
	Public and Operator Services	Bell Atlantic—West Virginia
	Federal Systems	Bell Atlantic—Washington, D.C.
		Bell Atlantic Network Integration
		Bell Atlantic Federal Systems Integ.
	Yellow Pages Advertising Sales and Service	Chesapeake Directory Sales
		National Telephone Directory
		Penn-Del Directory
	Electronic Composition and Database Management Services	Bell Atlantic Directory Graphics
	Long Distance Services	Bell Atlantic Communications, Inc.
Communications—Domestic Wireless Services	Cellular and Paging Services	Bell Atlantic NYNEX Mobile
	Personal Communications Services	PrimeCo Personal Communications*
Entertainment and Information Services	Video Information Provider	Bell Atlantic Video Services
	Nationally Branded Information, Home Entertainment, and Interactive Services	TELE-TV*
	Internet Access and Services	Bell Atlantic Internet Solutions
International	Telecommunications Services	Telecom Corporation of New Zealand Limited *
	Wireless Services	Grupo Iusacell, S.A. de C.V. *
		Omnitel Pronto-Italia *
		EuroTel Praha *
		EuroTel Bratislava *
		Pacific Star Communications *
Other	Real Estate Services	Bell Atlantic Properties
	Other	Bell Atlantic Professional Services

* *Minority investments*

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- Large Business Services, contributing 13% ($1.6 billion) to 1995 Network Services revenue, markets communications and information services to large businesses (customers having more than 20 access lines). These services include voice/switching/processing services (dedicated private lines, custom Centrex, call management and voice messaging), end-user networking (credit and debit card transactions and PC-based conferencing, including data and video), internetworking, network integration, network optimization, video services (distance learning, telemedicine, surveillance, videoconferencing), and interactive multimedia applications services.

- Directory Services, contributing 9% ($1.1 billion) to 1995 Network Services revenue, manages the provision of advertising and marketing services to advertisers and listing information (White Pages and Yellow Pages), as well as photocomposition, database management, and other related services to publishers.

- Public and Operator Services, contributing 6% ($700 million) to 1995 Network Services revenue, markets pay telephone and operator services in Bell Atlantic's territory to meet consumer needs for accessing public networks, locating and identifying network subscribers, providing calling assistance and arranging billing alternatives (calling card, collect, and third-party calls).

- Federal Systems Services, contributing 3% ($400 million) to 1995 Network Services revenue, markets communications and information technology and services to departments, agencies, and offices of the executive, judicial, and legislative branches of the federal government.

- Chesapeake Directory Sales Company, National Telephone Directory and Penn-Del Directory provide professional advertising sales and service for Yellow Pages directories.

- Bell Atlantic Directory Graphics provides region-wide electronic composition and database management services for directory advertising businesses.

Domestic Wireless Services includes the following operations:

- Bell Atlantic NYNEX Mobile is a partnership between Bell Atlantic and NYNEX that provides domestic cellular and paging wireless services to more than 3.4 million customers in the Northeast, mid-Atlantic, Southeast, and Southwest portions of the U.S.

- In March 1995, Bell Atlantic and NYNEX announced plans to jointly invest up to $100 million in CAI Wireless Systems of Albany (NY), a wireless cable company, to speed the delivery of video entertainment and information services to customers in the northeastern and mid-Atlantic states.

- In October 1994, Bell Atlantic, NYNEX, AirTouch, and U S WEST formed a wireless alliance to provide nationally branded prducts and wireless communications services.

  - The alliance, whose objective is to offer complementary cellular and personal communications services (PCS), will adopt a product-centered national branding strategy, develop network standards, and give its partners increased leverage in purchasing network and handset equipment.

  - The alliance formed PrimeCo Personal Communications, which is currently

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building PCS networks in licensed markets throughout the U.S. where the partners do not have a cellular presence, targeting a service launch in the fourth quarter of 1996.

- In March 1995, this partnership was a successful bidder for licenses to provide PCS services in 11 metropolitan areas, including Chicago, Dallas, Tampa, Houston, Miami, New Orleans, Milwaukee, Richmond, San Antonio, Jacksonville, and Honolulu. The partnership paid $1.1 billion for these licenses.

- In September 1995, PrimeCo Personal Communications announced provisioning contracts to equipment manufacturers Lucent Technologies and Motorola. The two companies will supply both hardware and software for a complete end-to-end wireless communications system, including base stations and switching equipment.

Entertainment and Information Services includes the following operations:

- Bell Atlantic Video Services (BVS), based in Reston (VA), is a wholly owned subsidiary with more than 110 employees that provides programming and video services, including the development and delivery of linear and interactive multimedia television services in the mid-Atlantic region.

- The Bell Atlantic/NYNEX/Pacific Telesis Multimedia Partnership, now known as TELE-TV, was formed in October 1994 to deliver the next generation of nationally branded home entertainment, information, and interactive services. In March 1995, Bell Atlantic gained legal approval to provide nationwide video services.

- Bell Atlantic Internet Solutions, formed in March 1996 and based in Reston (VA), was created to develop and deliver Internet-based services to consumers, business, and government.

International operations in the telecommunications, wireless services, and Interactive Multimedia TV (IMTV) services areas include the following:

- Telecom Corporation of New Zealand Limited (TCNZ), with Bell Atlantic and Ameritech each owning 24.8%, is the largest telecommunications company in New Zealand, providing local, national, and international telecommunications, cellular, and related services.

- Bell Atlantic has a 49% interest in Pacific Star Communications Pty Limited, a service integration and facilities management company in Australia. TCNZ owns the remaining 51% interest.

- Grupo Iusacell (with Bell Atlantic owning 41.9% equity interest) is the leading independent wireless telecommunications company in Mexico and operates a non-wireline cellular concession serving a population of more than 64 million people.

- The Omnitel Pronto-Italia consortium was awarded the second cellular license in Italy. Bell Atlantic has an 11.6% share in the consortium, which began delivering commercial services in December 1995.

- Bell Atlantic and U S WEST each have a 24.5% interest in EuroTel Praha and EuroTel Bratislava, cellular providers in the Czech Republic and Slovakia.

- Bell Atlantic, in partnership with STET, operates Sodalia, S.A., a joint venture located in Northern Italy to develop

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advanced network operating support software.

- In April 1995, Bell Atlantic International and Ing.C. Olivetti & C., Europe's leading information technology company, announced plans to form Infostrada S.p.A., a joint-venture company that will offer telecommunication services to business customers in Italy. Olivetti Telemedia will have a 67% interest in the new company and Bell Atlantic International will own 33%.

Other operations, related to consulting, training, leasing and real estate services, include the following:

- Bell Atlantic Professional Services broadens client knowledge of computer and telecommunications technologies, as well as general business skills, through classroom training, workshops, and packaged courses. This unit also provides contract temporary professionals in the information systems, financial/accounting, human resources, and technical/engineering areas.

- Bell Atlantic Properties is engaged in real estate investment and management, primarily in support of Bell Atlantic's core businesses.

Company Strategy

Bell Atlantic's actions in 1996 will focus on:

- Moving forward with the merger between Bell Atlantic and NYNEX

- Accelerating revenue growth and becoming the low-cost provider in its network business

- Competing aggressively for long-distance traffic originating in the Northeast Corridor and opportunities in the international long-distance market

- Expanding its business opportunities by building the broadband full-service network

- Establishing a national "footprint" for its wireless business, including expanding its PCS business

- Delivering video and other services over wireless cable and modernizing its network to switched broadband

- Carefully pursuing global investment opportunities that leverage its core competencies

Bell Atlantic is moving to establish leadership positions in four emerging markets—Network, Wireless Communications, Entertainment and Information Services, and International—that complement its strengths and increase its growth opportunities. Bell Atlantic's growth strategies in these markets are as follows:

- Network—to expand existing revenue streams by stimulating market demand; develop new high-growth business opportunities (data connectivity, long-distance, and video services); optimize network utilization and capabilities; improve cost structure and maintain low-cost provider status

- Wireless Communications—to optimize revenue opportunities in all key market segments; achieve maximum scale and scope efficiencies; drive margin growth and profitability; seek new opportunities to leverage core competencies

- Entertainment and Information Services—to develop a cable TV alternative and ultimately, a differentiated interactive TV product; develop Bell Atlantic Video Services to the same levels of customer service and marketing for video services as

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for traditional telecommunications products; develop Internet services to meet the informational, communications, and operational needs of any PC user

- International—To leverage core competencies in network, wireless, and entertainment and information services through selected investment in high-growth, high-return opportunities worldwide, including privatizations, wireless or second carrier, and partnering arrangements with existing carriers.

Financials

Bell Atlantic's 1995 revenue was $13.4 billion, compared to revenue of $13.8 billion in 1994. Net income was $1.86 billion, up from net losses of $754.8 million in 1994.

- Revenue from cellular operations is included in Bell Atlantic's total revenue only for the first six months of 1995. Effective July 1, 1995 with the formation of Bell Atlantic NYNEX Mobile, Bell Atlantic discontinued consolidation of its domestic cellular and paging operations. For the second half of 1995, Bell Atlantic accounted for its investment in Bell Atlantic NYNEX Mobile under the equity method.
- Excluding the company's domestic cellular and paging operations that were spun off in 1995, revenue exceeded $12.8 billion in 1995, up from $12.77 billion in 1994.
- Results for 1995 include a pretax gain of approximately $314 million ($200 million after tax) from the sale of certain cellular properties in Massachusetts and Rhode Island in connection with the formation of the Bell Atlantic NYNEX Mobile partnership.
- Results for 1994 included a noncash, after-tax extraordinary charge of $2.15 billion ($4.92 per share) in connection with the discontinuance of regulatory accounting and the revaluation of its telephone plants. Other charges totaling $125.3 million ($0.28 per share) were recording during 1994 in connection with a work force reduction program and the disposition of certain nonstrategic investments. 1994 earnings were also reduced by approximately $19 million ($0.04 per share) from the devaluation of the Mexican peso and $6.7 million ($0.02 per share) for debt refinancing.
- A five-year financial summary is shown on the following page.

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Bell Atlantic Corporation
Five-Year Financial Summary
($ Millions, except per share data)

Item	Fiscal Year 1995	1994	1993	1992	1991
Revenue	$13,429.5	$13,791.4	$13,145.6	$12,836.0	$12,659.7
• Percent change from previous year	(3%)	5%	2%	1%	--
Income before extraordinary items and cumulative effect of changes in accounting principles	$1,861.8 (a)	$1,401.9	$1,481.6	$1,382.2	$1,229.9
• Percent change from previous year	33%	(5%)	7%	12%	--
Net income (loss)	$1,858.3	$(754.8)	$1,403.4	$1,340.6	$(324.4)
• Percent change from previous year	(b) 256%	(b)(c) (154%)	(b)(d) 5%	(b) 513%	(136%)
Earnings (loss) per share	$4.24	$(1.73)	$3.22	$3.13	$(0.72)
• Percent change from previous year	(b) 345%	(b)(c) (154%)	(b)(d) 3%	(b) 535%	(125%)

(a) Includes gains from the sale of Bell Atlantic Business Systems Services and certain cellular operations during 1995.

(b) Includes extraordinary charges for the early extinguishment of debt, net of tax of $3.5 million ($0.01 per share), $6.7 million ($0.02 per share), $58.4 million ($0.13 per share), and $41.6 million ($0.10 per share) in 1995, 1994, 1993, and 1992, respectively.

(c) Includes extraordinary charges of $2.15 billion ($4.92 per share) associated with the discontinuation of certain regulatory accounting principles, $125.3 million ($0.28 per share) for a work force reduction program, and $19 million ($0.04 per share) from the devaluation of the Mexican peso.

(d) Includes a cumulative charge of $85 million ($0.04 per share) related to a change in the method of accounting for postemployment benefits.

Source of Revenue by Product / Service

A three-year summary of source of revenue is shown on the following page. For comparison purposes, results for all periods exclude revenue from Bell Atlantic's domestic cellular and paging operations, which were combined with those of NYNEX to form Bell Atlantic NYNEX Mobile during 1995 and are now accounted for under the equity method.

- Local service revenues come from the telephone subsidiaries for providing local exchange, local private line, and public telephone services.
- Network access revenues are received from interexchange carriers (IXCs) for their use of Bell Atlantic's local exchange facilities in providing long-distance services to IXC customers and from end-user subscribers.
- Toll services revenues are earned from calls made outside a customer's local calling area, but within the same service area boundaries of Bell Atlantic's telephone subsidiaries.
- Directory advertising revenues are derived primarily from local advertising

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and marketing services provided to businesses in White and Yellow Pages directories published throughout the region. Other directory publishing services include database and foreign directory marketing.

- Other ancillary services include systems integration services, billing and collection services provided to IXCs, facilities rental services, customer premises distribution, and video services.

- Value-added services represent a family of services that expand the use of the network and include voice messaging services, Caller ID, Return Call, Centrex, Touch-Tone, and customer-premise wiring and maintenance services.

- Other services include computer maintenance services (divested during 1995), real estate, and leasing businesses.

Bell Atlantic Corporation
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	1995		1994		1993	
Product/Service	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Network Services						
Transport Services						
Local service	$4,423.6	34%	$4,333.2	34%	$4,204.6	34%
Network access	3,394.7	26%	3,237.6	25%	3,070.9	25%
Toll service	1,435.1	12%	1,555.5	12%	1,558.0	12%
	$9,253.4	72%	$9,126.3	71%	$8,833.5	71%
Ancillary Services						
Directory advertising	$1,107.7	9%	$1,084.2	8%	$1,053.4	9%
Other	557.4	4%	481.0	4%	385.0	3%
	$1,665.1	13%	$1,565.2	12%	$1,438.4	12%
Value-added Services	$1,393.2	11%	$1,284.4	10%	$1,193.6	10%
Total Network Services	$12,311.7	96%	$11,975.9	94%	$11,465.5	93%
Other Services	$515.9	4%	$800.6	6%	$929.1	7%
Total*	$12,827.6	100%	$12,776.5	100%	$12,394.6	100%

* *Differences due to rounding.*

Interim Results

Total operating revenues for the three months ending March 31, 1996 were $3.21 billion, compared with $3.17 billion for the first quarter of 1995. Net income was $470.5 million, a 13% increase over $414.5 million for the same period a year ago.

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Market Financials

Bell Atlantic provides its telecommunications services to a range of business and residential customers and government.

Systems integration and professional services are provided to a range of businesses nationwide and telecommunications and government authorities in several countries.

Equity in income of affiliates was $236.4 million in 1995, $128.9 million in 1994, and $70.8 million in 1993.

- For comparability purposes, assuming Bell Atlantic held an equity position in Bell Atlantic NYNEX Mobile for all of 1995, 1994, and 1993, equity in income from Bell Atlantic NYNEX Mobile was $267.1 million in 1995, compared to $122 million in 1994 and $56.9 million in 1993. Increases were due to increases in the cellular subscriber base of 43% in 1995 and 58% in 1994.

- Equity in income of affiliates in 1995 and 1994 was further boosted by improved operating results from the investment in Telecom of New Zealand.

- These increases were offset by the effects of goodwill and equity losses for investments in Grupo Iusacell and equity losses for TELE-TV.

Geographic Markets

INPUT estimates that virtually all of Bell Atlantic's revenue is derived from the U.S. and less than 1% from international sources because most of Bell Atlantic's international interests are minority positions and are accounted for as equity income.

The company derives its telecommunications services revenue from the states of New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, and the District of Columbia.

Consulting and systems integration services are available worldwide through international units of Bell Atlantic.

Investments

In March 1995, Bell Atlantic and NYNEX announced an agreement to invest up to $100 million in CAI Wireless Systems, a wireless cable company, to speed the delivery of video entertainment and information services to customers in the northeastern and mid-Atlantic states.

- Bell Atlantic and NYNEX gain the right to use the distribution systems of CAI to begin offering digital video programming to customers as early as next year.

- Bell Atlantic and NYNEX will continue to develop and deploy full-service networks, pending FCC approval.

Bell Atlantic has made a number of investments internationally—including TCNZ, Grupo Iusacell, Omnitel Pronto Italia, EuroTel, Pacific Star Communications, and Sodalia—which have been summarized under the Organization and Structure section of this profile.

Divestitures

In the fourth quarter of 1995, Bell Atlantic sold its domestic computer maintenance subsidiary, Bell Atlantic Business Systems Services, Inc., and its interests in certain European computer maintenance operations to Decision Servcom for approximately $250 million. Total operating revenue related to this business was approximately $402 million in 1995,

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$472 million in 1994, and $386 million in 1993.

During 1995, in conjunction with the formation of Bell Atlantic NYNEX Mobile, Bell Atlantic sold certain cellular properties in Massachusetts and Rhode Island, recording a pretax gain of approximately $314 million in 1995.

In the second quarter of 1994, Bell Atlantic sold the assets of Bell Atlantic TriCon Leasing Corporation (except for leveraged lease and project finance portfolios) to GFC Financial Corporation. TriCon leases office, medical, and other equipment and provides other types of financing.

In the fourth quarter of 1994, Bell Atlantic sold substantially all of the assets of a computer leasing subsidiary, Bell Atlantic Systems Leasing International, including the company's 50% ownership interest in Pacific Atlantic Systems Leasing.

During 1994, Bell Atlantic divested Vision Energy Resources, a subsidiary that sells and distributes liquefied petroleum gas primarily in the midwestern U.S. and Florida. Vision Energy was a holding of Metro Mobile, a cellular acquisition in 1992.

Employees

As of December 31, 1995, Bell Atlantic and its subsidiaries had 61,766 employees (down from 72,339 employees as of December 31, 1994), segmented as follows:

Network operations	57,823
Network related	3,017
All other	926
	61,766

The company currently has approximately 61,200 employees.

Key Products and Services

The discussion that follows focuses on the information services offered by Bell Atlantic through its various business units.

Network Services

The Network Services telephone companies offer ISDN and several fast packet data transmission services to its business customers, including switched multimegabit data service (SMDS), frame relay, and ATM technology.

The Network Services companies also offer a range of "information services" such as message storage services, voice mail, electronic mail, and *Answer Call*—a telephone answering service aimed at residential and small business customers.

- T-Mail, released in 1995, is a telephone mailbox that allows customers to send messages directly to any individual or group of people that have the service.

- Other emerging products and services for consumers include residential ISDN and Internet access.

Network access services are provided to approximately 400 to 450 carrier customers, including interexchange carriers (such as AT&T, MCI, and Sprint), local exchange carriers, operator service providers, and cellular and wireless carriers.

- Carrier Services represented approximately 21% ($2.6 billion) of Bell Atlantic's Network Services revenue in 1995, of which about 73% was from switched access, 21% from special access, 4% from billing services, and 2% from wireless access.

- The Billing Validation Service is used by interexchange carriers to validate collect

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calls, calls billed to calling cards, and third numbers.

- New and emerging Carrier Services products and services include the following:
  - Advanced Intelligent Network (AIN)-based services
  - Carrier Identification Parameter
  - PCS Support Services
  - In-region InterLATA Transport
  - ATM
  - 888 Calling Services

Through Bell Atlantic Network Integration, Large Business Services offers a range of multivendor network integration services, including network architecture planning, installation, network management, relocation services, and post-installation support to companies nationwide.

Entertainment and Information Services

Bell Atlantic is preparing for the convergence of broadcast entertainment, information, and communications.

- The company intends to build the distribution system that can reach and service a significant customer base, create and market a recognizable brand to establish customer loyalty, and use cash flows generated from the customer base to continue development of content and applications.

- Bell Atlantic is developing a cable TV alternative (and ultimately an interactive TV product); an in-region Video Service Operator (Bell Atlantic Video Services) for video services; and Internet services.

TELE-TV, the Bell Atlantic/NYNEX/Pacific Telesis Multimedia Partnership, was formed to deliver the next generation of nationally branded home entertainment, information, and interactive services.

- The partnership has two separate profit centers—a technology and integration (platform) company and a media company.

- The platform company (TELE-TV Systems) will develop integrated delivery, business, and operating systems to support the transport of traditional and on-demand programming over VDT networks under construction by the partners and provide greater access for content providers and programmers.

- The media company (TELE-TV Media) will develop a nationally branded portfolio of traditional and interactive programming for wholesale distribution throughout the U.S. and internationally; develop a user-friendly navigator technology; and provide content development from multiple sources.

- Development efforts will result in programming delivered over several distribution platforms, MMDS wireless technology, full-service networks, and a Mega-Web Site on the World Wide Web.

- The TELE-TV brand is scheduled for introduction to a limited number of households in each partner's region in late 1996, with an aggressive launch following in 1997.

- TELE-TV now owns the Digital Production Center in Reston (VA), a full-scale facility designed to produce and deliver entertainment, information, and IMTV services on demand.

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Bell Atlantic Video Services (BVS), Bell Atlantic's in-region video service operator, is focused on the development of linear and interactive multimedia television (IMTV) services.

- The company currently employs approximately 110 people with backgrounds in cable, broadcast and network television, consumer retailing, advertising, systems integration, computers, and telecommunications.

- BVS has conducted technical and market trials for early navigator technology and has begun to build the infrastructure to distribute, market, and service the TELE-TV offering in-region. BVS will focus on in-region marketing and operations, as well as local and regional programming.

- BVS launched a large-scale video-on-demand consumer market trial ("Stargazer") in May 1995 after completing a two-year technical trial in northern Virginia.

Bell Atlantic Internet Solutions (BAIS), formed in March 1996 and based in Reston (VA), was created to develop and deliver Internet-based services to consumers, business, and government.

- BAIS will offer an array of products and services to facilitate dial-up and private line connections to the Internet, including a client browser, enhanced communication tools, full-service support for Web site production and hosting, and network integration and consulting. It will focus on high-value services, including transaction and advertising services.

- Primary emphasis will be on meeting the needs of small to medium-sized businesses and local governments in the mid-Atlantic region.

- The company is currently conducting a trial of high-speed, dedicated access services for connecting businesses with the Internet in the Washington, D.C. area.

- The unit is providing cobranded Netscape Navigator client software to residential customers and a range of Netscape client and server software to business customers.

International

Bell Atlantic International, Inc. provides telecommunications consulting and software systems integration services to telecommunications authorities in several countries and has entered into business development agreements with various governmental authorities.

Other

Bell Atlantic Professional Services, with 580 employees, provides classroom training, workshops, and packaged courses in the areas of computer and telecommunications technologies as well as general business skills. This unit also provides contract temporary professionals in the information systems, financial/accounting, human resources, and technical/engineering areas.

Marketing and Sales

Bell Atlantic markets its products and services through a direct sales force.

Alliances

In addition to the previously discussed alliances with NYNEX, AirTouch, and U S WEST, Bell Atlantic has agreements/alliances with various vendors as follows:

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- Under a marketing alliance with Digital Equipment Corporation, Bell Atlantic can make available to Department of Defense (DoD) information technology users more than 500 Digital hardware and software products and services for use in Bell Atlantic-installed networks through a Telecommunications Modernization Program (TEMPO) contract with the DoD. Under the 10-year contract, awarded in 1991, Bell Atlantic services more than 400 DoD organizations at 380 sites in the Washington metropolitan area.

- Bell Atlantic is working with Microsoft in a marketing effort to enhance awareness of ISDN and streamline the ordering, provisioning, and configuration process for users of Window 95 and Windows NT operating systems.

- Bell Atlantic, GTE, Pacific Telesis, and Southwestern Bell have entered into a service agreement to jointly promote IntelliBridge, a single point of contact for customers seeking information about advanced intelligent networks (AIN) and coordinate needs among AIN service providers.

Competitors

Bell Atlantic competitors in the network integration area include Digital Equipment Corporation, Andersen Consulting, AT&T, Advantis, Frederick Computers, CSC, I-NET, LAN Systems, MFS (Datanet and Network Technologies divisions), The Future Now, Syntrex Technologies, and Unisys.

Assessment

Bell Atlantic's strengths include:

- Modern network infrastructure
- Communications services efficiency
- A world leader in intelligent network software
- Expanded capabilities in wireless

Challenges over the coming year include:

- Markets being opened to competition
- Expanding into new markets for video and entertainment services
- Expanding into new markets for long-distance services

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Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

August 1995

Bell Atlantic Business Systems Services

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Bell Atlantic
Business Systems Services

Status:	Subsidiary
Parent:	Bell Atlantic Corporation
Employees:	4,200 (North America)
Revenue:	$450,000,000 *
Fiscal Year End:	12/31/94

** INPUT estimate*

Key Points

- Bell Atlantic Business Systems Services (BSS) is an independent information technology service provider providing enterprise-wide support from the largest mainframe data centers to networked distributed systems.
- The company's mission is to become the best global provider of services for information technology.

Company Description

Bell Atlantic BSS is an independent information technology service provider for multivendor hardware and software support, help desk support, network support and services management. The company has more than 21,300 customers at 88,400 sites in North America.

Bell Atlantic BSS was formed from the merger of the former Sorbus, Inc. and Control Data Corporation's (CDC's) Third Party Maintenance Division in 1989.

In April 1990, the company changed its name from Sorbus, Inc. to Bell Atlantic Business Systems Services to reflect the range of products and services that have evolved

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through internal product development and the acquisition of other service providers.

Organization and Structure

Headquartered in Frazer (PA), Bell Atlantic BSS is a wholly owned subsidiary of the Bell Atlantic Corporation. The company's headquarters houses the staff and administrative offices, education and training centers and national technical support facilities.

The company's core competencies include:

- Services Management
- Network Services
- Help Desk Services
- Multivendor Support

Bell Atlantic BSS has over 285 locations worldwide. The company also has an international operation—Bell Atlantic Business Systems International—and a worldwide parts repair, refurbishment and sales division—Bell Atlantic Computer Technology Services.

Bell Atlantic Corporation, based in Philadelphia, is the parent of companies that provide a range of local exchange telecommunications services in the mid-Atlantic region.

- Bell Atlantic is developing a variety of new products, including video, entertainment and information services.

- Bell Atlantic is also the parent of one of the nation's largest cellular carriers and has an ownership position in cellular properties internationally.

- In addition, Bell Atlantic is the parent of companies that provide business systems services for customer-based information throughout the U.S. and internationally.

Company Strategy

In order to be more competitive and react more quickly to customer needs, Bell Atlantic BSS has formed several alliances with prominent companies in the computer industry. These alliances have enabled the company to offer comprehensive solutions, knowledge and expertise to its customers.

The company is focusing on two significant market segments—Fortune 500 customers and alliance partners. It has a presence in over 40% of the Fortune 500 companies, that include software, hardware and network technology developers, systems integrators and value-added resellers.

The company has enhanced its customer support services, by maximizing existing equipment capabilities, and provided its customers the one-stop shopping capability. The company continues to place an emphasis on improving quality of service by monitoring all facets of its operations through quarterly surveys.

Financials

INPUT estimates that Bell Atlantic BSS' 1994 revenue was approximately $450 million, a 15% increase from 1993 revenue of $390 million.

A three-year revenue summary appears on the following page.

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Bell Atlantic Business Systems Services
Three-Year Revenue Summary
($ Millions)

Item	Fiscal Year		
	1994	1993	1992
Revenue*	$450	$390	$340
• Percent change from previous year	15%	15%	13%

** INPUT estimates*

Market Financials

Bell Atlantic BSS provides services across all industries. Primary industries targeted include manufacturing, utilities, distribution, insurance, services, state/local government, transportation, medical, banking/finance, education and federal government.

Bell Atlantic BSS provides direct support for over 650 manufacturers' products.

The company has more than 21,300 customers at 88,400 sites in the U.S. and Canada.

Geographic Markets

Bell Atlantic BSS provides services in the U.S. and Canada. The company provides services in Europe through its alliance partner International Computers Limited (ICL) Sorbus; and in the Pacific Rim through FBA Computer Technology Services.

Employees

As of December 1994, Bell Atlantic BSS had 4,200 employees.

The company currently provides services through more than 10,000 employees worldwide, including 6,000 employees of ICL Sorbus and 150 employees of FBA Computer Technology Services.

Key Products and Services

Bell Atlantic BSS offers a range of hardware, software and network support services.

Services Management

Service offerings include service evaluation, product acquisition, support planning, integration, maintenance, technology and product disposition, site planning, installation and operating system and applications support.

The Productivity and Availability Management System (PAMS) supports the Services Management program and consists of the following five software applications:

- Call Management—Tracks and manages complex multivendor service events in distributed environments
- Predictive Service—Supports the company's failure alerting and analysis tools for most environments
- Service Process Reengineering—Provides process documentation and a modeling capability to understand the impact of process changes before implementation
- Physical and Logical Configuration—Provides illustrations of a problem device's physical location, system connection and user profile
- Measurements and Analysis System—Manages services, assets and failure information from global information systems

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Network Services

Bell Atlantic BSS, in association with its sister company Bell Atlantic Network Integration and other partners, offers network services that include:

- Network planning and design
- Product procurement
- Integration and implementation
- User training
- Administration and management
- Upgrades and optimization
- Lifecycle management services

Help Desk Services

Bell Atlantic BSS offers three levels of telephone support:

- Basic call management
- Complex software and networking support
- Cross-trained experts to handle complex networking issues

The company also offers remote technical support services such as:

- End User Support packages—provide support for PC hardware and more than 150 applications

- Network Administrator programs—remote support for network operating systems

- Incident-based call blocks—targeted to small organizations, they include the End User Support and Network Administrator packages, with prices based on the number of support incidents

Bell Atlantic BSS has developed several service programs based on growing customer demands.

- The *Direct Access Customer Service* (DACS®) program provides customers with access to Bell Atlantic BSS' central dispatch systems from the customer's in-house help desk via a private telecommunications data link, allowing customers to open their own service calls and monitor their progress.

- *Dispatch Data Gathering* (DDG) is an on-line system containing records of customer service, assigned field engineers and prioritizes call urgency.

Multivendor Support

Bell Atlantic BSS provides on-site and remote support services for multivendor hardware and software. Support is available for:

- More than 10,000 hardware platforms in data-center, midrange, desktop and networking environments

- More IBM, DEC and Sun Microsystems equipment than any outside organization other than the manufacturers themselves

- More than 650 brands of hardware and 150 brands of software

IBM system software support tools include:

- Remote PSR (Premium Support Representative)—Support for MVS, VM and VSE operating systems

- ESXtra Support—Remote support for ES/9000 systems

- ASXtra Support and 3Xtra Support—Support services for OS/400, CPF or SSP

- RSXtra Support—System administration and client/server network support for AIX

DEC system software support tools include:

- DEXtra Support—Support services for VAX/VMS systems

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- MAXwatch—Predictive VAX system integrity monitor for standalone, network or cluster configurations

Value-added remote support for multivendor tools and services include the following:

- Service Edge is the company's fully-integrated PC-based account management system that provides customers necessary data to effectively manage their systems' service requirements.

- RxAvatar is a remote support tool with features such as file transfers, remote system administration, software distribution and dialogue mode.

- RxLink® is a connection device that is used by a remote diagnostic unit (RDU) to monitor a computer at a customer site.

Education and Training Programs

The company also offers education and training programs as well as quality measurement programs.

- Bell Atlantic BSS' training program provides engineers worldwide, with system-oriented training on hardware and software problem determination and operation of the overall system.

  - The training program employs about 25 full-time instructors and serves over 2,800 engineers annually.

  - The company studies the effectiveness of its training program by surveying its students six months after the successful completion of the program.

- Quality of Service Reports (QSR) is a survey system through which the company surveys customers to study the effectiveness of all facets of its operations.

Clients

Bell Atlantic BSS has more than 21,300 customers worldwide. Customers include Fortune 500 corporations and many international and governmental organizations.

Contracts

In March 1994, Bell Atlantic BSS was awarded multisite, multimillion dollar service contracts by the California counties of San Diego and Sacramento for support of their mainframe (IBM and DEC) data centers and PC networks.

- The four-year contract with San Diego and the two-year contract with Sacramento cover equipment at approximately 40 to 50 departments in each county.

- These contracts represent two of eleven California county contracts awarded to the company in 1993.

In October 1993, the company agreed to provide on-site service for Exabyte Corp. cartridge handling subsystems and deliver on-site warranty and post-warranty services in North America for Exabyte's automated tape library family.

In September 1993, Lockheed Information Technology Corp. awarded a five-year multimillion dollar contract Bell Atlantic BSS for service of its Denver data center and some other sites.

In September 1993, the company signed a multimillion dollar contract with AMR Corporation's SABRE Technology Group for support of approximately 250,000 AMR computers and peripherals in the U.S. and in 44 countries throughout Europe, as well as Middle and Far East.

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- Under the agreement, the company is supporting PCs, workstations, printers and other peripherals used by over 23,000 travel agencies and 42 airline customers to access AMR's SABRE and SAAS reservation and ticketing systems.

- The company is also supporting AMR's networked equipment and software applications at several locations.

Marketing and Sales

Bell Atlantic BSS provides services through its 400 offices worldwide, including those of ICL Sorbus and FBA Computer Technology Services. In the U.S. and Canada, the company has 125 offices and employs about 2,000 technical support personnel.

Through its relationship with ICL Sorbus, Bell Atlantic BSS provides integrated multivendor services for desktop and data center services throughout Western Europe. ICL Sorbus has operations in 15 countries and employs 6,000 employees.

The company serves the Pacific Rim countries through its Australian operation—FBA Computer Technology Services, which employs approximately 150 employees.

Alliances

To ensure a high quality of multivendor support, Bell Atlantic BSS has signed service alliances with a number of companies to provide seamless service and a single point of contact for all levels of equipment. These companies include computer and peripheral manufacturers, remarketers, value-added resellers, dealers and systems integrators and are listed below.

Exhibit
Bell Atlantic Business Systems—Alliance Partners

Access Graphics	Exabyte Corporation	Metrodata
Amdahl Federal Service Corporation	Fujitsu Computer Products of America	Netlink, Inc.
Artecon	GE Capital	NeXT
AT&T GIS	Computer Leasing	Novell
Cambex Corporation	HaL Company	On Track Consulting
CIE America	ICL International	The PARSEC Group
Cray Research	ICL Retail Systems	Sequent Computer Systems
Data General Corporation	Intel	Sun Microsystems
Data South	Intertrade	SunGard Recovery Services
Computer Corporation	IPL Systems, Inc.	SunSoft
EMC Corporation	Landmark Graphics	Tandem Company
	Memorex Telex	Winton Labs

The company has formed an alliance—the Distributed Support Information Standards (DSIS) Group—with several companies to promote the development of international standards for service and support information in distributed computing environments. Other members of the group include DEC, EDS Corporation, Hewlett-Packard, HaL Computer Systems, IBM, ICL PLC, Landmark Systems, Microsoft, October Technologies,

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Olivetti, Oracle, Proteon, SHL System House, Tally Systems Corp., Tandem, Sun and Unisys.

Competition

In the information technology support market, Bell Atlantic BSS competes with manufacturers such as IBM, DEC, Sun Microsystems and others.

Other significant competitors include Vanstar and Decision Servcom.

INPUT Assessment

Bell Atlantic BSS' major strengths include:

- Non-systems bias
- Depth and breadth of services
- Experience in diverse information technology environments

Major challenges for the coming year include:

- Accelerated development of comprehensive support services
- Expanded strategic alliances

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Parent Company

Bell Atlantic Corporation
1717 Arch Street
Philadelphia, PA 19103
Phone: (215) 963-6000
Revenue: $13,791,400,000 (12/94)

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INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

August 1996

Bell Atlantic Network Integration, Inc.

Chairman: Anthony T. Murray, Jr.
President & CEO: Jack Sweeney
52 East Swedesford Road
Frazer, PA 19355
Phone: (610) 407-2000
Fax: (610) 296-9075
Internet: http://www.bani.com

Bell Atlantic
Network Integration

Status:	Subsidiary
Parent:	Bell Atlantic Corporation
Employees:	700 (8/96)
Revenue:	$150,000,000 *
Fiscal Year End:	12/31/95

** INPUT estimate*

Key Points

- Bell Atlantic Network Integration (BANI) provides a range of multivendor network integration and outsourcing services that meet the needs of corporations in a changing business environment.
- The company's vision is to build enterprise-wide information networks that will provide companies with access to a private or public information highway.
- While BANI provides services in network design, project management, implementation, and maintenance/technical support, the company's focus has shifted to professional services that include enterprise network management, consulting, and out-tasking/outsourcing services.
- In 1995, BANI's revenue grew by more than 25%, the company added more than 150 engineers to its staff, and it completed more than 2,200 new projects.

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- In 1995, Anthony T. Murray, Jr. succeeded John T. Losier as Chairman of the Board. Mr. Murray was also elected President of the Bell Atlantic Large Business Services line of business in November 1995, and prior to that appointment, was in the position of President for the Bell Atlantic Federal Systems line of business.

- In 1995, Jack Sweeney was appointed to the position of President and CEO. Mr. Sweeney's most recent position prior to this appointment was Vice President of Sales for BANI.

- During 1995, BANI became the first company to receive both a "Gold" partner certification from Cisco Systems, Inc. as well as a "Business Development" partner certification from Bay Networks, Inc.

Company Description

BANI, established in August 1992, provides a range of multivendor network integration services, including network architecture planning and design, product procurement, premises wiring, installation, network management, consulting, and postinstallation support to companies nationwide.

The company also offers outsourcing services through its Managed Network Services practice, as well as messaging and Internet planning and implementation services.

Organization and Structure

Headquartered in Frazer (PA), BANI is a wholly owned subsidiary of Bell Atlantic Corporation. In addition to its headquarters, BANI serves customers from 32 locations across the U.S. The company's headquarters maintain its administrative offices, the Enterprise Support Center (ESC) that houses the Technical Research Center, international technical support facilities, and the Network Operations Center (NOC).

Bell Atlantic Corporation, based in Philadelphia, is the parent of companies that provide a full array of local exchange telecommunications services in the mid-Atlantic region.

- The corporation is at the forefront of new product development, including video, entertainment, and information services.

- Bell Atlantic is the parent of one of the nation's largest cellular carriers and has an ownership position in cellular properties internationally.

- Bell Atlantic is also the parent of companies that provide business systems services for customer-based information throughout the U.S. and internationally.

Company Strategy

BANI is a full-service enterprise network integrator committed to providing unbiased complex network infrastructure solutions and a comprehensive set of network professional services from network planning, design, and implementation to network management, maintenance, and out-tasking/outsourcing services.

The company's market focus is on complex enterprise-wide network infrastructures integrating data, video, multimedia, and voice technologies.

BANI's core competencies include leading-edge technologies such as switching, ATM, ISDN, remote access to LAN, Internet connectivity, videoconferencing, and desktop collaboration, and how these technologies interoperate in wide-area and local-area environments.

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The company also has technical and marketing agreements with all major systems manufacturers.

Financials

INPUT estimates BANI's 1995 revenue to be approximately $150 million, a 25% increase over an estimated $120 million in 1994.

INPUT estimates that approximately 87% of the company's 1995 revenue was derived from network integration services and about 13% from its outsourcing activities.

Market Financials

BANI provides services across all industries. Vertical markets served include banking and finance, business service, education, health care, and state and local government.

Geographic Markets

One hundred percent of BANI's revenue is derived from North America.

Employees

BANI currently has 700 employees. Nearly 85% of the employees are field engineers and technical support personnel.

Key Services

BANI's core networking services address each of the three phases in its clients' strategic information network experience, known as the Network Lifecycle: designing/planning, implementing, and managing/supporting.

BANI's Network Lifecycle Management establishes the company as a single point of contact for all network issues, throughout the network's evolving lifecycle. BANI also provides complete managed network services, videoconferencing, and information access services.

Network Lifecycle Management

Designing/Planning—BANI Consulting uses a multidisciplinary team of consulting professionals and an Enterprise Network Planning Methodology to design and plan all aspects of enterprise networks. The BANI consulting teams brings together the most appropriate set of skills and expertise to address the client's requirements.

Each of the following areas has a dedicated group of cross-geographic consultants with expertise and currency in the latest trends, technologies, and issues in their respective areas.

- Network Architecture Planning/Design Services—The company offers network assessment, planning, project management, and design and testing services for the evaluation, implementation, network management, and upgrade of a customer's systems to accommodate current and future technological requirements.

  Laboratory Testing Services—The company's Technical Research Center (TRC) is equipped with network diagnostic and management tools for testing the interoperability and compatibility of specified network components in a controlled environment.

  - The TRC offers expertise in wide-area network technologies such as ATM, SMDS, T1, T3, ISDN and Remote LAN Access, Frame Relay, and LAN technology, including 10/100 base T, Token Ring, Ethernet, FDDI, Network Operating Systems, multimedia, remote network management, and videoconferencing.

  - The TRC also includes a multivendor interoperability test bed for ATM network design validation and application testing. Areas of service include:

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- Equipment certification and configuration
- Design and documentation services
- Interoperability verification and certification
- Standards body representation
- Network troubleshooting

- Enterprise Network Management Planning—Management and planning of standard platforms and applications, and operational policies and procedures. On-site and remote management services include capacity planning, performance management, problem isolation and resolution, vendor coordination, and configuration management. To complete its suite of professional services, BANI provides a wide range of on-site consultative services that include security management and asset management services.

- Messaging and Internet Access—BANI also provides messaging, Internet services planning, and security services.

  - Messaging—Services include messaging architecture, design, and implementation for a wide range of electronic communication forms, including E-mail, Internet, fax, video, electronic commerce, voice clips, and groupware.

  - Internet Services—Internet planning and access services include evaluation of networking, hardware, and technology requirements, as well as the development of an architecture for establishing a presence on the Internet.

  - Security Services—Services include detailed firewall design and recommendations on hardware, software, and services, as well as security audit and recommendations on the use of data encryption.

Implementing—BANI uses cross-functional teams to provide network services, procurement of hardware and software, installation, end-to-end testing, and training. A project manager, serving as a single point of contact for the client, coordinates the integration of design, cost, schedule, and resource information.

- Network Implementation Services—BANI offers seamless integration of the customer's existing hardware, software, protocols, and interfaces with new networking technologies.

  - The company supports all platforms, and its technical support staff is trained to work with operating systems such as Banyan's VINES, Microsoft NT, Novell's NetWare, and emerging UNIX environments.

  - BANI specializes in LAN/WAN integration into customers' local environments.

- Cabling and Wiring Services—Service offerings in this category include connectivity integration of voice, data, and video applications.

- Product Procurement Services—Through the key relationships that it forms with hardware and software vendors, BANI procures cost-effective, high-quality products that meet or exceed customer requirements.

Managing/Supporting—BANI provides remote monitoring, management, and support services with on-site personnel, remote support from the NOC, or a combination of both. These services are provided for all levels of fault, performance, accounting, and

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configuration management, as well as security.

- Support Services—The company provides Enterprise Support Services up to 24 hours a day, 7 days a week. Service offerings include call management, dispatch, help-desk, on-site support, remote support, system configuration assistance, disaster avoidance services, remote network management and monitoring, and consulting services.

- BANI employs a three-tiered support system whereby problems that cannot be resolved by the Tier I engineering teams are escalated to BANI's internal Tier II engineering support staff in the Technical Assistance Center (TAC). Engineers in the TAC have direct access to the manufacturers' product development engineers, the third tier in the system.

Managed Network Services

Formerly known as "Functional Outsourcing" and "Full Outsourcing," BANI offers professional technical services that are required to operate and maintain a state-of-the-art communications network.

- Services range from single functions, such as helpdesk and infrastructure support (moves/adds/changes) and remote network monitoring and management, to complete operation of an entire enterprise-wide network.

- Services include desktop support, LAN/WAN operation and maintenance, and proactive/reactive monitoring and management of data, voice, and video networks.

Videoconferencing Services

BANI offers the following videoconferencing solutions:

- Desktop Systems—BANI sells most major desktop video systems.

- Rollabout/Room-Based Systems/Bridges—The company offers installation and support services for rollabout/room-based videoconferencing systems.

Clients

BANI currently has approximately 2,400 clients, up from about 1,250 clients in mid-1995. Some significant examples of customer contracts include the following:

- In July 1996, BANI entered into a seven-year strategic outsourcing agreement, known as the Pinnacle Alliance, for the management of portions of the technology infrastructure of J.P. Morgan, a leading global banking firm.

  - The agreement will take the form of a service contract between J. P. Morgan and Computer Sciences Corporation (CSC). CSC will, in turn, have contracts with BANI, Andersen Consulting, and AT&T Solutions.

  - Under the agreement, BANI's primary responsibility is supporting distributed computing services in the U.S., such as desktops, LANs, and servers.

  - The agreement is estimated to have a combined value of more than $2 billion.

  - BANI currently provides J.P. Morgan with communications services, maintenance, and support in New York and Delaware, and branch-office network implementation throughout North America.

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- In January 1996, BANI was awarded a $1 million contract by the Educational Testing Service (ETS) of Princeton (NJ) to design, implement, and remotely manage an ATM backbone network connecting ETS's Princeton-area campuses for the support of voice, data, and future video traffic.

- In April 1996, BANI was awarded a $7.4 million project management contract for General Motors. The contract includes coordinating a fiber-optic infrasturcture project supporting 122 General Motors plants throught the U.S., Canada, and Mexico.

- In May 1995, BANI won a five-year contract with Summit Bank to completely overhaul and integrate Summit's three existing diverse and separate networks, replacing them with dedicated, high-capacity data networks. BANI is also to provide Enterprise Network Management Services (ENMS), proactively monitoring over 100 router devices in the Summit Bank wide-area network (WAN). BANI's solution is designed to speed communications and transaction information and increase network reliability between financial counselors at different Summit Bank locations.

- In April 1995, BANI was awarded a $140 million, five-and-one-half-year outsourcing contract with USAir to manage the airline's voice and data communications network. The network includes reservations, administrative and operational centers, sales offices, and retail ticket centers in some 150 major cities throughout the U.S. The contract was designed to save USAir 10%-15% in network-related expenses during the first year.

Marketing and Sales

BANI serves customers nationally through its headquarters in Frazer (PA) and 32 locations across the U.S., including a major presence in New York (NY), Boston (MA), and Atlanta (GA), which are outside the traditional Bell Atlantic region.

Alliances/Vendor Relationships

BANI has formed several key vendor relationships over the past few years, including with the following vendors, in the specified relationships:

- 3Com—Systems Integrator
- Ascend—Value Added Reseller
- Banyan Systems Incorporated—Premier Network Integrator
- Bay Networks—Authorized Reseller
- Cabletron—Authorized Reseller
- Cisco—Gold Partner
- CLI—Medallion Partner
- Gandalf—Reseller
- Microsoft Corporation—Solutions Provider - member
- Newbridge—Reseller
- Novell, Inc.—Platinum Reseller
- PictureTel—Authorized Reseller
- Raptor—Security System Reseller
- Sun Microsystems Computer Corp.—Commercial Systems Integrator

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Competition

BANI competes with Andersen Consulting, AT&T, Advantis, CSC, EDS, Frederick Computers, IBM, I-Net, LAN Systems, MFS (Datanet and Network Technologies divisions), US West, and Unisys.

INPUT Assessment

BANI's major strengths include:

- Its fully equipped Network Operations Center (NOC) for remote monitoring of clients' enterprise-wide networks
- Its world-class Technical Research Center and interoperability lab
- Its technical-to-sales personnel ratio, which is one of the highest in the industry and growing
- Its independence from vendors and focus on best solutions for the customer
- Its ongoing training for sales and presales staff and certification of engineering and technical support personnel

Challenges for the coming year include:

- Building the company's market identity and credibility
- Recruiting and deploying top-quality network professionals
- Competing against established players in the enterprise networking environment

Parent Company

Bell Atlantic Corporation
1717 Arch Street
Philadelphia, PA 19103
Phone: (215) 963-6000
Revenue: $13.5 billion (12/95)

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INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

November 1995

BellSouth Corporation

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Chairman, President & CEO: John L. Clendenin
Vice Chairman & COO: F. Duane Ackerman
1155 Peachtree Street, N.E.
Atlanta, GA 30309-3610
Phone: (404) 249-2000

Status:	Public
Employees:	89,544 (9/30/95)
Revenue, FYE 12/31/94:	$16,845,000,000
Revenue, 9 mo. ending 9/30/95	$13,221,200,000

Key Points

- BellSouth is the largest of the seven Bell holding companies formed at the divestiture of AT&T in 1984.
- During 1994, BellSouth achieved record earnings of $4.35 per share and net income of more than $2.1 billion, a 145% increase over the previous year.
- The company continues to undergo staff reductions and streamlining efforts initiated during 1993 in order to serve its customers more effectively and reduce costs. Employee reductions were 3,900 in 1994 and 1,300 in 1993. In May 1995, BellSouth announced that it expected to reduce its work force by 14,000 to 16,000 jobs over the next two years in order to position the company aggressively in the competitive telecommunications environment.
- BellSouth plans to expand into the fast-growing area of video programming through a joint venture with Walt Disney Company, Ameritech, GTE and SBC Communications that will develop, market and deliver video programming to consumers.
- BellSouth continues to expand its international operations for cellular and

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mobile data services in the Asia/Pacific region, South America and Europe.

- Revenues from services provided to AT&T, BellSouth's largest customer, contributed approximately 11%, 14% and 14% of 1994, 1993, and 1992 operating revenues, respectively.

Company Description

BellSouth provides a range of telecommunications services and communications systems and products through two wholly owned subsidiaries—BellSouth Telecommunications, Inc. and BellSouth Enterprises, Inc.

The company provides local and toll telecommunications services, access services, billing and collection services, operator services, directory advertising and publishing, domestic and international cellular telephone and paging services, and broadband services. BellSouth also sells and maintains customer premises equipment.

- With $34 million in assets, BellSouth is the largest of the Bell companies.

- With more than 20 million access lines in service, BellSouth has the largest domestic customer base.

- BellSouth has a strong wireless presence in the U.S., serving more than two million cellular and 1.6 million paging customers.

- BellSouth has expanded its presence internationally, providing or developing communications services in 17 countries on five continents.

- BellSouth is the nation's largest publisher of Yellow Pages directories.

- The company plans to aggressively pursue a corporate strategy of expanding its offerings beyond traditional businesses. Such new offerings may include information services, interactive communications and cable television and other entertainment services.

During 1993, BellSouth announced plans for a restructuring to redesign and streamline the fundamental processes and work activities in BellSouth Telecommunications' telephone operations to better respond to an increasingly competitive business environment.

- The ongoing restructuring is expected to improve overall responsiveness to customer needs, permit more rapid introduction of new products and services and reduce costs.

- As part of the restructuring, BellSouth is consolidating and centralizing its operations and is establishing a single point of contact and accountability for the receipt, analysis and resolution of customer installation, repair activities and service activation. The plan includes consolidating 288 operations centers into 80 locations and a reduction in data management centers supporting company operations from 11 to 6.

- The original plan included a reduction in the company's work force of approximately 10,200 employees by the end of 1996 through normal attrition, transitional programs, other voluntary options and involuntary separations. The work force was reduced by 1,300 employees in 1993 and 3,900 employees in 1994, and an estimated 5,000 jobs are planned to be eliminated in 1995.

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- In May 1995, BellSouth announced that it expects to reduce its work force by 14,000 to 16,000 jobs over the next two years, having identified an addition 9,000 to 11,000 reductions.

Organization and Structure

BellSouth's organizational structure is shown in Exhibit A and includes the following principal units:

- *BellSouth Telecommunications, Inc. (BST)*, headquartered in Atlanta, provides telecommunications services within the BellSouth region. BST does business as Southern Bell in Florida, Georgia, North Carolina and South Carolina and as South Central Bell in Alabama, Kentucky, Louisiana, Mississippi and Tennessee.

- *BellSouth Enterprises, Inc.* comprises three major business groups—Mobile Systems (wireless communications), Broadband (broadband interactive network services) and Advertising and Publishing (advertising sales and publication of Yellow Pages and telephone directories).

- *BellSouth International* is responsible for BellSouth's operations and business development outside the U.S.

The activities of BellSouth's various units are summarized in the *Key Products and Services* section of this report.

Company Strategy

BellSouth's mission statement is to be a preeminent global provider of voice, data and video services in the communications industry.

The company offers three strategies as follows:

- *In-Region Strategy*—To continue to be the leading communications company in its nine-state Southeastern region; building on its customer base, brand name, network and distribution channels; and to evolve into a full-service multimedia company

- *Domestic Wireless Strategy*—To grow this business profitably within and outside the company's nine-state region, including personal communications services and residential interactive services

- *International Strategy*—To continue to grow existing operations and expand into new markets and related network services. The company's international geographic focus is Latin America, Europe and the Pacific Rim. Lines of business include wireless, with recent expansion into fixed network opportunities, including long-distance.

Financials

BellSouth's 1994 revenue reached $16.84 billion, a 6% increase over 1993 revenue of nearly $15.9 billion. Net income reached $2.16 billion, up more than 145% from net income of $880.1 million.

- Results for 1993 include a charge of nearly $1.14 billion related to restructuring BellSouth's telephone operations.

- A five-year financial summary appears on page 5.

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Exhibit A
BellSouth Corporation Organization Structure

BellSouth Corporation

BellSouth Telecommunications	BellSouth Enterprises	BellSouth International
• Consumer Operations - Consumer Services - Small Business Services - BellSouth Business Services BellSouth Advanced Networks BellSouth Communications Systems Dataserv BellSouth Financial Solutions BellSouth Network Solutions - Interconnection, Public, AIN and Operator Services • Network and Technology • Regulatory and External Affairs • Services - Human Resources & Benefits Administration - Property, Procurement & Service Management - Information Systems	• Mobile Systems Group - BellSouth Cellular Corp. BellSouth Mobility Inc. American Cellular Communications Corp. - BellSouth Wireless, Inc. - BellSouth Personal Communications, Inc. - Mobile Communications Corp. of America - BellSouth Mobile Data, Inc. • Broadband Group - BellSouth Interactive Media Services • Advertising and Publishing Group - BellSouth Advertising & Publishing Corp. InfoVentures of Atlanta - The Berry Company - Stevens Graphics - Intelligent Media Ventures	• Abiatar S.A. (Uruguay) • Beijing Ji Tong-BellSouth (China) • BellSouth Celular S.A. (Chile) • BellSouth Chile S.A. • BellSouth International, Inc. • BellSouth New Zealand • BellSouth Shanghai Centre, Ltd. (China) • Cellcom Israel Ltd. • Compania del Radio-comunicaciones Moviles S.A. (Argentina) • DMT Dansk MobilTelefon I/S (Denmark) • E-Plus Mobilfunk GmbH (Germany) • Optus Communications Pty. Ltd. (Australia) • Skycell Communications Private Limited (India) • TCIL BellSouth, Ltd. (India) • Telcel Celular, C.A. (Venezuela)

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BellSouth Corporation
Five-Year Financial Summary
($ Millions, except per share data)

	Fiscal Year				
Item	1994	1993	1992	1991	1990
Revenue	$16,844.5	$15,880.3	$15,201.6	$14,445.5	$14,345.4
• Percent change from previous year	6%	4%	5%	1%	2%
Income before taxes	$3,402.7	$1,605.7	$2,591.9	$2,260.3	$2,409.2
• Percent change from previous year		(a) (38%)	15%	(6%)	(2%)
Net income	$2,159.8	$880.1	$1,617.7	$1,471.5	$1,631.5
• Percent change from previous year	145%	(a) (46%)	10%	(10%	(6%)
Earnings (loss) per share	$4.35	$1.77	$3.30	$3.04	$3.38
• Percent change from previous year	146%	(a) (46%)	9%	(10%)	(7%)

(a) Includes a restructuring charge of $1,136.4 million, which reduced net income by $696.6 million ($1.40 per share).

Interim Results

Revenue for the nine months ending September 30, 1995 reached $13.12 billion, a 5% increase over $12.45 billion for the same period in 1994. Net losses of $1.07 billion for the period include one-time charges of more than $2.7 billion related to BellSouth discontinuing the accounting method traditionally used by regulated telephone companies and $15.8 million for debt refinancing.

Revenue Analysis by Product/Service

Approximately 72% of BellSouth's 1994 revenue was derived from network and related services, 9% from directory advertising and publishing, 12% from wireless communications and 7% from other services.

- Other services primarily include billing and collection services provided by BellSouth Telecommunications, computer premises equipment sales and maintenance services, provision of parts and maintenance services for computer equipment and services provided by BellSouth Enterprises' subsidiaries other than wireless and directory publishing and advertising.

- A three-year summary of source of revenue by product/service follows:

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BellSouth Corporation
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	1994		1993		1992	
Product/Service	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Network and related services						
- Local service	$6,863.1	41%	$6,577.3	41%	$6,236.0	41%
- Interstate access	3,127.2	19%	2,991.2	19%	2,945.6	19%
- Intrastate access	908.3	5%	881.9	6%	871.8	6%
- Toll	1,190.1	7%	1,219.5	8%	1,248.8	8%
Directory advertising and publishing	1,556.0	9%	1,515.4	9%	1,459.8	10%
Wireless communications	2,066.3	12%	1,553.4	10%	1,195.6	8%
Other services	1,133.5	7%	1,141.6	7%	1,244.0	8%
Total	$16,844.5	100%	$15,880.3	100%	$15,201.6	100%

Market Financials

BellSouth derives its revenue from residential, business and government customers and other telecommunications companies.

Geographic Markets

Virtually all of BellSouth's revenue is derived from the U.S. Operations/ partnerships outside the U.S. are accounted for under the equity method and are not included in revenue.

Acquisitions

In July 1994, BellSouth acquired RAM Broadcasting Corporation's (RBC's) 50% interest in the paging segment of an investment formerly jointly owned by BellSouth and RBC, thereby giving BellSouth a 100% interest in the entity.

In December 1993, BellSouth increased its ownership interest in TelCel Cellular C.A.—a cellular telephone company providing services to all major cities in Venezuela—from 44% to 53.26%. BellSouth accounts for its investment in TelCel using the equity method.

Divestitures

During the third quarter of 1995, BellSouth announced an agreement to sell its paging assets for $945 million in cash. The deal is expected to close in early 1996. BellSouth plans to continue to offer its customers paging services through reseller agreements.

In December 1994, BellSouth reached an agreement with ALLTEL Corporation to dispose of all or controlling interests in cellular properties serving the Carolinas, contingent upon its being awarded a PCS license for that area.

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In November 1994, BellSouth sold its 4% interest in a company providing cellular service in France, recording a $40.1 million gain.

In 1994, BellSouth Communications Systems, Inc., (a wholly owned subsidiary) sold its customer premise equipment sales and service operations outside its nine-state region service by BellSouth Telecommunications to WilTel Communications Systems, Inc.

In January 1994, BellSouth disposed of its 36% interest in the cellular telephone business in Guadalajara, Mexico. As a result, a gain of $67.5 million was recognized.

Employees

As of December 31, 1994, BellSouth had approximately 92,100 employees, compared to 95,100 employees in December 1993 and 97,100 employees in December 1992.

As of September 30, 1995, the company had 89,544 employees.

Key Products and Services

BellSouth offers a range of telecommunications and network services and products as described below.

BellSouth Telecommunications, Inc. (BST)

BTI, with headquarters in Atlanta, provides telecommunications services within the BellSouth region. BST services, in the aggregate, approximately 67% of the population and 50% of the territory within Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee.

BST does business as Southern Bell in Florida, Georgia, North Carolina and South Carolina and as South Central Bell in Alabama, Kentucky, Louisiana, Mississippi and Tennessee. These companies service more than 20 million local telephone lines and provide local exchange and intraLATA long-distance services.

BST is organized into four groups as follows:

- The Customer Operations group is responsible for all marketing and sales functions within BST, including market planning, product development, advertising, promotions, sales and service. It consists of four large operating units designed to serve each of BST's key market segments.

  - Consumer Services, the largest of the units, serves more than 14 million residential access lines. Of the four units, Consumer Services is the biggest contributor to BST's revenues through local and access service, intraLATA toll and value-added services such as TouchStar® and MemoryCall®.

  - Small Business, customers with one to six lines, has more than 1.2 million customers throughout the region. This unit uses a consultative approach to provide communications services for its customers.

  - BellSouth Business Systems (BBS) is a subsidiary of BST that serves large business customers with seven or more lines, providing a single point of contact for sales and customer service. BSS also includes the following five companies:

    - BellSouth Advanced Networks develops customized network solutions for the application of shared public and private hybrid network infrastructure,

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enabling platform capabilities and professional services.

- BellSouth Communication Systems provides customer premises equipment, such as fully integrated voice and data telephone systems, computerized key telephone systems, telecommunications management computers and related peripheral devices.

- Dataserv is an independent service organization providing technology support solutions in the desktop, network and retail technology markets. Services include hardware maintenance, software support, help desk, network support and technology deployment. Dataserv reported 1994 revenue of $140 million and has a head count of approximately 1,400 employees.

- BellSouth Financial Services is a leasing company that finances the integrated solutions offered by BellSouth.

- BellSouth Network Solutions was established in August 1994. This unit focuses primarily on the LAN interconnection market for complex business customers, providing consulting and project management services.

- The Interconnection, Public AIN and Operator Services unit serves BST's largest customers, the interexchange carriers, as well as public pay phone customers and operator services. This unit also includes the Advanced Intelligent Network (AIN) services group.

- The Network and Technology group manages the network operations of BST across the nine-state region.

- Regulatory and External Affairs pursues regulatory actions.

- The Services Group includes a number of support functions, including human resources and benefits administration; property, procurement and services management; and information systems operations.

BST has announced the largest geographic deployment of ISDN in the nation. More than 75% of BST customers throughout the nine-state region have access to this all-digital network.

BellSouth Enterprises

BellSouth Enterprises consists of three major business groups—Mobile Systems, Broadband and Advertising and Publishing.

Mobile Systems provides wireless communications services regionally and nationally through its cellular paging and mobile data operations.

- BellSouth Cellular Corp. provides cellular service to more than 2.1 million customers (on an equity basis) through its two subsidiaries—BellSouth Mobility (the largest cellular carrier in eight Southeastern states) and American Cellular Communications Corporation (providing cellular services in Los Angeles, Houston, Milwaukee, Indianapolis and other major markets throughout the U.S.). Simon™ was the first commercially available handheld personal communicator on the market.

- Mobile Communications Corporation of America (MobileComm) provides wireless

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messaging services in markets nationwide. With more than 1.6 million pagers in service, MobileComm provides service throughout all 50 states, Canada, Puerto Rico and the Virgin Islands. Pagers are marketed through more than 14,000 retail outlets across the U.S.

- BellSouth Wireless provides long-term strategic planning for BellSouth's wireless business.

- BellSouth Personal Communications, Inc. is building PCS networks and will provide PCS service to nearly 12 million potential customers in the Carolinas and East Tennessee. The company is also pursuing additional PCS licenses in the Southeast through partnerships and FCC auctions.

- BellSouth Mobile Data operates or has interests in mobile data networks in the U.S. as well as overseas. Mobile data networks are operational or under development in the U.S., the U.K., Australia, Belgium, the Netherlands, France, Germany and Singapore.

  - BellSouth and RBC have formed a business (RAM Mobile Data) to own and operate certain mobile data communications networks worldwide. These networks enable mobile applications, such as computer-aided dispatch, electronic mail, transaction processing and remote data entry and retrieval. They can also be used for fixed applications such as credit card validation and telemetry. The RAM networks cover the top 100 metropolitan markets and 90% of the urban U.S business population.

  - Mobile Trader℠ is a new RAM service from USEMCO Technologies that enables subscribers to receive real-time quotes on stock, option and futures markets as well as to execute trades wirelessly.

BellSouth's Broadband Group is responsible for the long-term strategic development of broadband interactive network services. The group is developing the technical and marketing platforms for broadcast entertainment and interactive services and is working with information services providers to develop programming.

- The North Carolina Information Highway (NCIH), developed by BellSouth and several other telecommunications partners for the state of North Carolina, is the world's first broadband multimedia network of significant scale. This SONET-based/ATM-switched network will serve hundreds of public sites, including schools, universities, community colleges, prisons and government facilities. In early 1995, BST filed a tariff to make the ATM and SONET capabilities of the NCIH available to business customers throughout the state.

- BellSouth also belongs to a consortium that will develop a highway similar to NCIH in Kentucky.

- BellSouth has earmarked about $500 million over the next two years to develop targeted broadband solutions for business customers.

- In mid-1995, BellSouth commenced a residential broadband trial in the Atlanta area. The trial will reach 12,000 homes, delivering traditional one-way broadcast entertainment; customer-controlled programs such as movies on demand; interactive two-way video, including video games; enhanced computer and communications services; and

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transactional services, such as home shopping.

BellSouth Advertising & Publishing Corporation (BAPCO) markets and publishes Yellow Pages advertising and white pages directories for BellSouth's Southern Bell and South Central Bell telephone operations.

- The Berry Company markets and publishes Yellow Pages directories as an independent sales agent for BAPCO and approximately 200 independent telephone companies.

- Stevens Graphics produces and prints telephone directories for BAPCO. In addition, Stevens prints directories and catalogs for other unaffiliated companies.

- Intelligent Media Ventures is focused on database and software development aimed at linking consumers with the marketplace.

- InfoVentures of Atlanta is a joint venture between BAPCO and Cox Newspapers to trial pay-per-call services in the Atlanta market using 511. Services include electronic Yellow Pages, electronic classifieds, and consumer news and information.

BellSouth International (BSI)

BSI is responsible for BellSouth's operations and business development outside the U.S.

BSI's business development activities are focused on wireless as well as fixed network and long-distance operations. Principal operations are in Latin America, Europe and the Asia/Pacific region.

Outside the U.S., BellSouth owns interests in consortiums that hold licenses for and are building and/or operating cellular telephone systems in Argentina, Australia, Denmark, Germany, Israel, New Zealand, Uruguay and Venezuela.

BellSouth Celular S.A. is a 100% BellSouth-owned subsidiary that provides cellular services in Chile.

BellSouth Chile S.A. is a wholly owned unit of BellSouth that operates a domestic and international long-distance network in Chile.

BellSouth is a partner in mobile data businesses being developed in Australia, Belgium, France, Germany, the Netherlands, Singapore and the U.K.

BellSouth is a 24.5% participant in Optus, an international consortium that provides a range of telecommunications services in Australia, including domestic and international long-distance, cellular and personal communications and all forms of private line and business network services.

BellSouth is providing a range of voice and data communications equipment and services to Shanghai Centre, one of China's largest multiuse real estate projects.

In January 1994, BellSouth signed a joint venture agreement with Ji Tong, an operating company of China's Ministry of Electronic Industries to contract telecommunications and information network projects, including providing network planning, design, and engineering services, as well as software and hardware systems integration.

BellSouth has signed a memorandum of understanding with China United Telecommunications, Ltd. to provide planning and consultation services in the

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development of long-distance and wireless networks in China's fastest growing areas.

BellSouth and Telecommunications Consultants India Limited have jointly formed TCIL BellSouth, Ltd.—an India-based software company that develops software products and services for the telecommunications industry.

Marketing and Sales

BellSouth markets its products and services through a direct sales force and through various alliances.

Alliances/Investments

BellSouth has a joint venture with Ameritech, SBC Communications, GTE and Walt Disney to develop, market and deliver traditional and interactive video programming services to consumers.

BellSouth's equity method investments primarily include various partnerships in domestic cellular properties, mobile data communications, investments in international cellular properties and other international communications consortiums. Earnings (losses) related to investments accounted for under the equity method were $(109.8 million) in 1994, $11 million in 1993 and $76.7 million in 1992.

Domestic Cellular

BellSouth's domestic cellular investments consist primarily of a 60% noncontrolling financial interest in the Los Angeles Cellular Telephone Company and a 43.8% interest in the Houston Cellular Telephone Company.

Mobile Data Communications

In January 1992, BellSouth and RBC formed an investment to own and operate certain mobile data communications networks worldwide as well as certain cellular and paging operations in the U.S.

- The mobile data portion of the investment gives BellSouth a 49% interest in the U.S. mobile data operations, which is owned by RBC and various interests in foreign mobile data operations ranging from 5% to 90%.

- In July 1994, BellSouth acquired RBC's 50% interest in the paging segment of the investment, giving BellSouth 100%.

BellSouth is a 24.5% participant in Optus, an international consortium that provides a range of telecommunications services in Australia, including domestic and international long-distance, cellular and personal communications and all forms of private line and business network services.

BellSouth is approximately a 21% participant in the E-Plus Mobilfunk consortium, which, during 1993, became the successful bidder for the second private German GSM PCN license.

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COMPANY
PROFILE

BGS SYSTEMS, INC.
128 Technology Center
Waltham, MA 02254-9111
Phone: (617) 891-0000
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President:	Harold S. Schwenk, Jr.
Status:	Public Corporation
Total Employees:	132
Total Revenue:	$30,322,000
Fiscal Year End:	1/31/93

Key Points

- BGS Systems, Inc. (BGS) systems software products provide integrated capacity management for medium and large IBM Series AS/400, RS/6000, 370, and DEC VAX/ALPHA systems. The company currently has over 30,000 sites installed in 30 countries.

- The advent of client/server computing has produced a significant opportunity for BGS to market and sell its LAN management and LAN server performance monitoring tools.

- Fiscal 1993 revenues grew 20% to $30,322,00, while net income grew 16% to $6,727,000.

- One of the most significant trends in the information systems market has been the trend toward downsizing. BGS Systems' system monitoring expertise is complementary to most downsizing activities.

- BGS has delivered the BEST/1-Visualizer for BEST/1 Datacenter™, which extends the applicability of BGS products beyond capacity planning into the critical information systems areas of daily performance reporting and analysis, performance tracking, and historical trend analysis. BEST/1-Visualizer is a PC-based performance management tool for displaying and analyzing performance data. BGS has delivered BEST/1 for UNIX for the IBM RS/6000 and has announced additional UNIX products for Hewlett-Packard and Sun Microsystems platforms.

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Company Description

BGS Systems, Inc., founded in 1975, markets system performance management systems software products and related professional services.

Initially, BGS applied proprietary modeling technology to solving computer performance problems in medium to large data centers. Subsequently, BGS has focused on products and services in the area of performance management and capacity planning.

Operations/ Structure

BGS headquarters are located in Waltham, Massachusetts. BGS does not maintain any U.S. branch offices. The company relies heavily on telephone marketing.

BGS currently has foreign subsidiaries in the U.K. and Germany, France, Italy, and Spain. Operations in the following countries or regions are handled by independent distributors: Australia, Latin America, Hong Kong, Japan, South Africa, Southeast Asia and the Pacific Rim.

- BGS Systems, Limited, the company's U.K. subsidiary, serves Ireland, France, Scandinavia, Spain and the U.K.
- BGS Systems GmbH, the company's West German subsidiary formed in February 1989, services Germany, Austria and the Benelux countries.
- BGS Systems s.r.l., an Italian subsidiary, was established in 1992.

BGS is expanding its foreign marketing and to date has made sales to over 200 major foreign companies.

Strategy

BGS has made a major increase in product development activity in order to deliver the BEST/1 product line for multiple platforms and open systems. Currently, BGS products cover UNIX, MVS, VM, OpenVMS, and the AS/400 and are being extended to OS/2 and Windows NT.

The new design of BEST/1-Datacenter has a unique ability to evaluate the performance of multiple mainframes.

BGS strategic plans are focused on preparing for other client/server environments, including additional UNIX platforms.

Finally, BGS is focusing on key strategic alliances, including a recent announcement of a cooperative effort with Hewlett-Packard to deliver

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a complete open-systems performance and capacity management solution.

Financials

BGS Systems' fiscal 1993 revenue reached $30.3 million, an increase of 20% over fiscal 1992 revenue of $25.3 million. In the five-year revenue summary that follows, financials have been restated to reflect continuing operations:

BGS SYSTEMS, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ thousands, except per share data)

	FISCAL YEAR				
ITEM	1/93	1/92	1/91	1/90	1/89
Revenue	$30,322	$25,338	$22,329	$20,159	$18,001
· Percent increase from previous year	20%	13%	11%	12%	17%
Income before taxes	$10,211	$8,839	$8,060	$6,445	$4,715
· Percent increase from previous year	16%	10%	25%	37%	119%
· Gross margin	29%	31%	36%	32%	26%
Net income	$6,727	$5,785	$5,115	$4,016	$2,954
· Percent increase from previous year	16%	13%	27%	36%	112%
Dividends per share	$2.59	$1.60	$2.55	$1.40	$2.20
· Percent increase (decrease) from previous year	62%	(37%)	24%	(34%)	109%

BGS management attributes the company's fiscal 1993 financial results to strong new license revenues in both domestic and international markets. Management believes that these results are due to the introduction into the market of BGS' new BEST/1-Datacenter product.

One hundred percent of BGS' revenue is derived from its systems software products and associated support services. A three-year summary of source of revenue follows:

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BGS SYSTEMS, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	1/93		1/92		1/91	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
Systems software						
- License fees	$13.8	46%	$9.1	36%	$8.6	38%
- Maintenance	13.4	44%	13.3	53%	12.5	56%
- Other	3.1	10%	2.9	11%	1.2	6%
TOTAL	**$30.3**	**100%**	**$25.3**	**100%**	**$22.3**	**100%**

Employees

As of January 31, 1993, BGS had 180 employees, of which 140 were located in Waltham, Massachusetts, and 40 in Europe and Asia.

Competition

Major competitors include LEGENT Corporation, Boole & Babbage, and Computer Associates. BGS also continues to face competitive pressure from Digital Equipment Corporation.

Key Products and Services

BGS products cover a wide range of computing platforms, including mainframe (MVS and VM), midrange (VAX and AS/400) and workstations (UNIX, initially for the IBM RS/6000).

BGS' systems software products provide integrated capacity management for medium and large IBM Series 370, 303x, 308x, 309x, and 43xx, and compatible computers, as well as distributed UNIX systems, including the RISC System/6000. The company currently has over 30,000 products installed in 30 countries.

BEST/1 Product Line:

The BEST/1 family of products is used to predict the future performance of a computer system, SNA network, or new application based on any set of proposed changes to equipment or workloads. BEST/1 solutions run on multiple platforms including MVS, VM, VAX/VMS, AS/400 and UNIX.

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BEST/1 products include BEST/1 DASD Consultant, which helps customers to optimize performance of their MVS data storage system and IMS Support Facility, and expands the performance and capacity solution available for customers who use IMS.

New Products in the BEST/1 product line include:

- BEST/1-Datacenter™, a new product announced in fiscal 1992, provides an integrated performance view of a multicomputer operating environment.

- BEST/1-Visualizer, a new product announced in 1993, is a PC-based performance management tool for displaying and analyzing performance data. This product has been implemented under Windows 3.1 and is able to run under OS/2 Release 2.1.

Network Management Products:

BESTnet™ products are integrated software tools that help to manage the performance of an entire SNA network. These products provide performance evaluation and service level management of IBM SNA networks. The BESTnet products perform network data reduction, workload characterization, performance reporting, baseline model building, and analytical modeling for SNA networks.

BESTnet CAPTURE products access raw performance data collected from several different sources, including software and hardware network performance monitor data. BESTnet CAPTURE provides a merge facility that consolidates performance data from multiple hosts. BESTnet CAPTURE also integrates with BEST/1, allowing automated definition of a network topology.

CRYSTAL Product Line:

The CRYSTAL family of products uses a technology similar to BEST/1, a mathematical model, to predict the performance impact that a new application will have when it is installed, and can identify performance bottlenecks in new applications before the applications go on-line.

The CRYSTAL Performance Evaluator™ is a software tool that quantifies and predicts DB2, CICS, and IMS application performance. The CRYSTAL Performance Evaluator contains an automatic interface to BGS Systems' BEST/1-Datacenter and BEST/1-MVS Capacity Planning products.

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Support Facilities:

BGS Support Facilities for BEST/1-Datacenter are optional products that read additional measurement data in order to present a more detailed view of the subsystem. The following support facilities are available:

- Batch Support Facility (BSF)
- CICS Support Facility (CSF)
- DB2 Support Facility (DSF)
- IMS Support Facility (ISF)

Product Markets:

BGS Systems' current products are oriented toward five market segments:

- For large IBM data centers running MVS, the products include BEST/1-Datacenter™, CAPTURE/MVS™, BGS Support Facilities, and Best/1 DASD Consultant™.

- For large IBM data centers running VM, the products include BEST/1-VM™, CAPTURE/VM™, and The VM Applications Planner.

- For large IBM data centers running SNA networks, the products include BESTnetGRAPH/PACK™, BESTnet CAPTURE™, BEST/1-MSNF™, and CAPTURE/MSNF™.

- For large IBM data centers planning to add new applications, the products include CRYSTAL, CRYSTAL/CICS™, CRYSTAL/IMS™, CRYSTAL/DB2™, and Crystal Performance Evaluator™.

- For DEC VAX/VMS data centers running VMS, products include BEST/1-OpenVMS™ and CAPTURE/VMS™.

- For distributed UNIX environments, BEST/1 for UNIX is a software product family that enables centralized performance and capacity management in distributed UNIX environments.

Consulting and Maintenance Services:

Approximately 90% of the company's software customers subscribe to BGS Systems' annual maintenance services, which include product upgrades, a telephone hotline, product training, technical notes, and an electronic bulletin board.

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- The fee for these services is billed and payable in one lump sum at the beginning of each maintenance year.
- To minimize support expenses, the products are designed so that they may be installed by the users.

BGS provides consulting services related to the application of its products for specific customer requirements.

Clients

BGS has a diverse customer base that covers many industries, including airlines, banking and finance, insurance, communications, computer services, energy, pharmaceuticals, health care, manufacturing, retailing, utilities, and government.

Industry Markets

BGS derives its revenue from clients across industry sectors and currently licenses its products to more than 1,000 customers.

- The company's customers include manufacturers, banks, insurance companies, retailers, educational institutions, transportation companies, service companies, utilities, and government agencies.
- Approximately 135 Fortune 500 companies, as well as a number of the largest U.S. insurance companies and financial institutions, are customers for one or more of BGS Systems' products.

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Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

February 1996

The BISYS Group, Inc.

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President & COO: Paul H. Bourke
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Status:	Public Corporation
Employees:	1,500 (6/95)
Revenue:	$200,527,000
Fiscal Year End:	6/30/95

Key Points

- The BISYS Group, Inc. (BISYS) is a leading national provider of information processing, investment services and image-based technologies to financial institutions and other companies.
- In May 1995, BISYS expanded its image-based services with the acquisition of Document Solutions, Inc.
- In August 1995, BISYS sold off its residential mortgage loan servicing division after determining these operations were not strategic to BISYS' long-term growth goals.

Company Description

BISYS is a leading third-party provider of transaction processing and related services to the financial services industry.

The company's primary outsourcing services are provided to commercial and savings banks, thrifts, mortgage banking companies and other financial services organizations through the TOTALPLUS® family of solutions.

BISYS was organized in August 1989 to acquire certain banking and thrift data processing operations from Automatic Data Processing, Inc. (ADP). Together with its predecessors, BISYS has been providing processing services for over 25 years.

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BISYS went public in March 1992, selling 5.5 million shares of common stock and generating net proceeds of about $52 million. In December 1992, the company completed a second public offering of 2.4 million common shares, resulting in net proceeds of $37.9 million.

Organization and Structure

BISYS is organized into two groups as follows:

- BISYS Information Services Group, with approximately 900 employees, provides image and data processing outsourcing services and pricing analysis to more than 600 banks nationwide. Its integrated family of products is delivered under the umbrella of its single, national product—TOTALPLUS. TOTALPLUS consists of central- and client-site applications integrated to provide bank-wide automation for retail and commercial services, mortgage banking, credit/loan administration, financial and marketing management, management information, bank operations and electronic banking.

- BISYS Investment Service Group, with approximately 600 employees, designs, administers and distributes over 30 families of proprietary mutual funds consisting of more than 325 portfolios and provides 401(k) marketing support, administration and record-keeping services in partnership with 17 of the nation's leading bank and investment management companies. BISYS' goal is to create competitive advantages by focusing on the strategic marketing and sales initiatives designed to help its partners raise assets in 401(k) plans.

Company Strategy

BISYS' objectives are to increase the number of its clients and to expand the services it offers them. To achieve these objectives, BISYS has adopted the following six key principles:

- *Serve Clients Through Innovative Solutions.* BISYS seeks to strengthen business relationships with clients by offering new products and services designed to be technologically advanced solutions for improving client performance, growth and competitive position in changing markets.

- *Leverage Technological Advancements.* BISYS seeks to maintain its leadership position in providing competitive, valued-added outsourcing solutions through investment in new technology and the further integration of BISYS system capabilities.

- *Grow Internally and Sell Aggressively.* To grow internally, BISYS seeks to sell services to new clients and cross-sell additional services to existing clients that support their objectives to retain existing customers and attract new customers from new markets. BISYS focuses its sales activities on targeted growing markets.

- *Optimize Human Resources.* BISYS seeks to attract and retain executives, technical staff and financial services professionals with the expertise required to explore and develop new opportunities that will sustain its growth and market leadership position.

- *Exploit Business and Product Strategy.* BISYS seeks to capitalize on the synergies among its business units and to acquire complementary companies that support its client relationships and long-term business objectives.

- *Grow Through Strategic Acquisitions.* Strategic acquisitions represent an important growth tool for BISYS. BISYS seeks to combine conservative valuation

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discipline and transition experience to achieve market synergies and leverage operations.

Financials

BISYS' fiscal 1995 revenue reached $200.5 million, a 17% increase over fiscal 1994 revenue of $170.8 million. Net losses were $6.5 million in fiscal 1995, compared to net income of $18.9 million in fiscal 1994.

- Net losses include merger-related expenses of $32.3 million before taxes ($24.6 million after taxes) related to the acquisitions of Concord Holding in March 1995 and Document Solutions in May 1995.

- Without these charges, fiscal 1995 net income would have been approximately $18.1 million ($0.75 per share).

In the five-year summary that follows, financials prior to fiscal 1995 have been restated to reflect the pooling-of-interest acquisitions of Concord Holding and Document Solutions.

The BISYS Group, Inc.
Five-Year Financial Summary
($ Millions, except per share data)

	Fiscal Year				
Item	6/95	6/94	6/93	6/92	6/91
Revenue	$200.5	$170.8	$112.4	$88.3	$71.1
• Percent change from previous year	17%	52%	27%	24%	--
Income (loss) before taxes	($4.1)	$26.9	$13.9	($19.2)	($15.9)
• Percent change from previous year	(a) N/A	94%	(b) 172%	(b) (21%)	--
Net income (loss)	($6.5)	$18.9	$20.8	($20.7)	($16.0)
• Percent change from previous year	N/A	(9%)	(c) 200%	(29%)	--
Earnings (loss) per share	($0.27)	$0.84	$0.99	($1.46)	($1.64)
• Percent change from previous year	N/A	(15%)	168%	11%	--

(a) Includes nonrecurring charges of $32.3 million before taxes ($24.6 million after taxes) associated with the acquisitions of Concord and DSI in fiscal 1995.

(b) Includes nonrecurring charges of $9.1 million in fiscal 1993 and $9.3 million in fiscal 1992 for restructuring.

(c) Includes a $13.7 million gain from the cumulative effect of a change in the method of accounting for income taxes.

Revenue growth in fiscal 1995 was attributed to a combination of sales to new clients, existing client growth, and cross-sales to existing clients, partially offset by lost business.

- In the Information Services Group, strong direct sales added more than 40 new community bank clients. Cross-sales to existing bank partners reached record levels

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with branch automation and relationship banking services fueling growth.

- In the Investment Services Group, the Plan Services Division exceeded its sales goals and added almost 1,500 new 401(k) plans. The number of eligible plan participants now exceeds 600,000. In the Fund Services Division, four new mutual funds clients were added. In addition, cross-sales of 401(k) administration services resulted in four new Plan Services partnerships with existing Fund Services clients.

Research and development expenses were approximately $9.4 million, $8.9 million and $7.4 million in fiscal years 1995, 1994 and 1993, respectively.

Revenue Analysis by Product/Service

INPUT estimates approximately 56% ($112 million) of BISYS' revenue is derived from its outsourcing information services and 44% ($89 million) from its various investment services.

Interim Results

Revenue for the six months ending December 31, 1995 reached $108.2 million, a 14% increase over $94.7 million for the same period in 1994. Net income reached $12.3 million, compared to net income of $8.0 million for the same period a year ago.

Market Financials

INPUT estimates more than 90% of BISYS' revenue is derived from the banking and finance industry. The remainder of revenue is derived from insurance companies and corporate customers.

BISYS provides its outsourcing services to commercial banks, savings institutions, thrift organizations, bank-managed mutual funds, insurance companies, corporate clients and other financial organizations, including investment counselors and brokerage firms.

Geographic Markets

One hundred percent of BISYS' revenue is derived from the U.S. The company's clients are located in all 50 states.

Acquisitions

In May 1995, BISYS acquired Document Solutions, Inc. (DSI) of Birmingham (AL) for approximately 1.8 million shares of BISYS common stock valued at about $38 million. The acquisition was accounted for as a pooling of interests.

- DSI was formed in 1992 to develop and market check and back office imaging software for community banks. DSI's products help banks reduce the limitations of physical document processing by substituting electronic images for paper documents such as checks, deposit slips and internal forms. DSI had approximately 125 bank customers at the time of the acquisition and currently has more than 250 customers.

- DSI is expected to generate $16 million in revenue during fiscal 1996.

- The operations of DSI have been merged into BISYS Information Services Group.

In March 1995, BISYS acquired Concord Holding Corporation for approximately 5.9 million shares of BISYS common stock. The acquisition was accounted for as a pooling of interests.

- Concord now operates as BISYS Fund Services, part of the BISYS Investment Services Group.

- BISYS Fund Services, with annual revenue of approximately $27 million, distributes

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and administers proprietary mutual funds for the bank-managed mutual fund sector. Concord also provides distribution services, including the development of joint and external sales and marketing programs, and cost effective administrative services, including shareholder recordkeeping, compliance and fund accounting, for its bank-managed mutual fund clients.

Divestitures

In August 1995, BISYS sold all of the outstanding capital stock of its wholly-owned subsidiary BISYS Loan Services, Inc. (BLSI) to a financial services company.

- BLSI provided servicing for residential mortgage loans primarily under subservicing contracts with mortgage banks.
- As part of the transaction, BISYS received a four-year contract to continue to provide data processing services to this unit.
- This business was immaterial in size to BISYS and was not strategic to long-term growth goals.

Employees

As of June 30, 1995, BISYS had approximately 1,500 employees.

The company currently has 1,500 employees.

Key Products and Services

Information Services

BISYS provides outsourcing solutions for data processing operations of banking institutions through its TOTALPLUS integrated family of services and products.

- Although the TOTALPLUS family of services and products is adaptable to financial institutions of any size, BISYS believes that the target market, based on assets, consists of small and mid-sized institutions (commercial banks of $100 to $2 billion in assets and thrift institutions of $100 million to $10 billion assets).
- Using central site and client site solutions, TOTALPLUS supports most aspects of a banking institution's automation requirements. TOTALPLUS is a comprehensive system, integrating innovative applications to provide bank-wide automation that enables financial institutions to complete with super regionals, banks serving a national marketplace and non-bank competitors.
- The TOTALPLUS family of products and services provide bank-wide automation, integrating mainframe-based, central site and PC-based, client site applications.
- There are currently more than 400 financial institutions implementing TOTALPLUS.
- BISYS Information Services Group's four major data processing centers are located in Chicago (IL), Cincinnati (OH), Houston (TX) and Philadelphia (PA). These regional service centers are uniformly automated with multitasking IBM (or equivalent) mainframe computer systems on which all TOTALPLUS host computer functions and client data are resident.
- Both internal and external backup resources are maintained and regularly tested for BISYS' own disaster recovery purposes.
- Additionally, BISYS maintains uniformly automated document processing centers which use IBM-based minicomputers and reader/sorter capabilities. Document processing centers are strategically located nationwide.

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BISYS' DSI subsidiary provides image-based technology software to community banks.

- DSI's Image Solution software has been installed in more than 250 community banks representing over 70% of all community bank check imaging systems in the country.

- This PC-based software is designed to provide a fully integrated image environment and supports a range of image processing equipment. The product family provides image-based statements, archive/retrieval, proof-of-deposit, check-statement research, returns and exception processing, signature verification, electronic character amount recognition, document (file folder) imaging and integrated COLD solutions.

The Research Services arm of the Information Services Group provides pricing-decision support services to the financial industry. This business unit gathers information on deposit and loan products offered by more than 4,000 banks, thrifts and credit unions on a daily, weekly, or monthly basis.

- BISYS markets and transmits this survey information in various formats and frequencies to over 700 client institutions, including 23 of the nation's top 25 commercial banks.

- This data is used by both money center and community banks to support their daily pricing decisions.

The fee structure for Information Services clients is based primarily on the number of accounts, participants and/or transactions handled for each service, in some cases subject to minimum charges, plus additional charges for special options, services and features.

Investment Services

BISYS provides outsourcing solutions for proprietary mutual funds through its Fund Services Division and corporate sponsored 401(k) plans through its Plan Services Division.

The Fund Services Division distributes and administers proprietary open-end mutual funds primarily for the bank-managed mutual fund sector.

- BISYS provides distribution services, including the development of joint and external sales; marketing programs and administrative services include responsibility for administration, transfer agency, shareholder services, compliance and fund accounting.

- BISYS' fund partners include a combination of nationwide regional and money center banks as well as other investment management firms.

- The fee structure for mutual fund services is based primarily on the average daily net asset value of the fund, in some cases, subject to minimum charges.

The Plan Services Division supports financial organizations and corporate clients with marketing and sales support and administration and participant recordkeeping services for corporate sponsored 401(k) plans.

- BISYS maintains partnerships with financial organizations, including banks and investment and insurance companies, and provides marketing and proposal support for the sale of their investment products in 401(k) packages.

- BISYS provides marketing and sales support to 17 financial organization partners and administrative and participant recordkeeping services for more than

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600,000 eligible participants in more than 4,500 sponsoring companies nationwide.

- The fee structure for Plan Services is based on the number of eligible participants in a plan subject to certain minimums.

Clients

Information Services Group clients include Everett Mutual Savings Bank (WA), Asheville Savings Bank (NC), Brenton Bank of Des Moines (IA), Roosevelt Bank (MO), First Financial Savings Bank (NJ), First Keystone Federal (PA) and Equitable Federal Savings Bank (MD).

Marketing and Sales

BISYS sells its services directly to potential clients or supports insurance companies, brokerage firms and other entities offering 401(k) plan investment options in their endeavors to gain new clients.

For the DSI division, in addition to direct sales, resellers/distributors are used to sell its software.

BISYS uses an account executive staff to provide client account management and support. In accordance with BISYS' strategy of providing a single source solution to its clients, the account executive staff also markets and sells additional services to existing clients and manages the contract renewal process.

In addition to all major office locations, BISYS has sales offices in California, Florida, Massachusetts, Oklahoma, Pennsylvania, Virginia and Michigan.

Alliances

BISYS has various alliances/marketing agreements with vendors, including the following:

- Baker Hill Corporation—Credit analysis solutions
- Fair, Issac & Companies—Loan origination and credit scorecard solutions
- CFI ProServices—Compliance documentation solutions
- Lowenstein & Associates—Loan portfolio grading solutions
- Financial Management Solutions—Teller management solutions
- Bottomline Technologies—Payment issuing solution
- Strategic Solutions Group—Consumer loans-by-phone solution

Competition

Principle competitors in the information services area include Fiserv, M&I Data Services, ALLTEL Information Services and SEI Corporation.

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COMPANY
PROFILE

BMC SOFTWARE, INC.
P.O Box 2002
Sugar Land, TX 77487-2002
Phone: (713) 240-8800

President & CEO:	Max P. Watson Jr.
Status:	Public
Stock Exchange:	NASDAQ
Total Employees:	782 (3/92)
Total Revenue:	$184,607,000
Fiscal Year End:	3/31/92

Key Points

- Founded in 1980, BMC Software, Inc. (BMC) has based its product strategy on developing the systems software that will ensure the availability, performance, integrity, and control of the mainframe data base and data communication systems of major corporations, government agencies, and other large institutions.

- BMC's steady growth and profitability over the past five years has been well above industry norms (averaging 50-60% in revenue, net income, and earnings per share).

- Revenues continued to grow at 44% in the past year, despite the economic slowdown and trends toward downsizing of information systems. With many large systems shops holding off on major hardware purchases, software to improve performance of their current mainframe systems has a particular appeal.

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Company Description

BMC Software develops, markets, and supports systems software products to enhance IBM mainframe data base management, network management, and data communications software, principally IMS/DB, IMS/TM, DB2, and CICS.

- The company's products are designed to improve performance, eliminate bottlenecks, facilitate recovery, lower data center and network operating costs, and reduce the need for hardware and software upgrades.

- BMC sells all of its products via telemarketing, direct mail, and product seminars. Through these channels, the company's sales force targets its efforts toward data center personnel who make systems software purchase decisions, encouraging them to accept and test a product on a free trial basis.

- The telemarketing approach lowers the cost of sales well below field sales, and allows the company to build a predictable business pipeline. This, plus a large number of annual maintenance agreements, gives BMC more earnings visibility than most mainframe software suppliers.

Acquisitions

Although BMC's growth strategy is based on internal product development, BMC has made a small number of company or product acquisitions in the past three years. Key acquisitions include the following:

- In December 1991, BMC acquired the mainframe systems software products and customer licenses of Schumann Unternehmensberatung AG, a German-based software consulting and marketing organization, for approximately $5.6 million. The acquisition allowed BMC to pick up a large installed base of IMS products and additional development expertise in IMS utilities.

- In November 1990, BMC acquired the outstanding stock of Integrity Solutions Inc. (ISI), a privately held Littleton (CO) company, in a pooling of interests. ISI's journal management and data recovery products for CICS and VSAM were repackaged and enhanced as seven new BMC products, collectively known as the CICS Integrity Series.

- In January 1989, the company acquired Trimar Software Systems Ltd. for $4.5 million in cash. Trimar developed the Trimar Fast Path Series of products for the IMS/VS Fast Path Subsystem.

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Alliances

During fiscal 1992, BMC announced a DB2 technology development agreement with Bachman Information Systems (Burlington, MA).

- As of September 1991, the two companies agreed to trade technology in order to develop products that facilitate synchronization of the data model design with physical data base implementation.

- BMC's focus is DB2 administration, monitoring, utilities, and compression, while Bachman markets tools for re-engineering, development, and maintenance of large-scale information systems.

Financials

BMC's fiscal 1992 total revenues reached $184.6 million, a 44% increase over fiscal 1991 revenue of $128.2 million. Net income rose 90%, from $24.4 million in fiscal 1991 to $46.2 million in fiscal 1992. In the five-year summary that follows, financials have been restated to reflect a change in the method of accounting for first-year maintenance revenue.

BMC SOFTWARE, INC.
FIVE-YEAR FINANCIAL SUMMARY (a)
($ millions, except per share data)

	FISCAL YEAR				
ITEM	3/92	3/91	3/90	3/89	3/88
Revenue	$184.6	$128.2	$85.6	$53.2	$36.4
· Percent increase from previous year	44%	50%	61%	46%	N/A
Income before taxes	$66.8	$36.5	$23.7	$10.9	$7.0
· Percent increase from previous year	83%	54%	118%	55%	N/A
Net income	$46.2	$24.4	$15.8	$7.8	$4.5
· Percent increase from previous year	90%	54%	103%	72%	N/A
Earnings per share	$1.79	$0.97	$0.65	$0.34	$0.19
· Percent increase from previous year	85%	49%	91%	79%	N/A

(a) Results were restated in April 1992 to reflect a change in the method of accounting for first-year maintenance revenues.

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BMC management characterized the past year's financial results as a continuation of the company's steady growth and profitability over the past several years, which it says is the result of its execution of a proven business strategy.

- Total license revenues increased by 40% in fiscal 1992, due primarily to increased sales of the IMS Database Utilites and Masterplan products for DB2.
  - North American license revenue grew 28% to $55.5 million. Slowed growth was attributed to weak U.S. and Canadian economies, increased competitive pressures in the DB2 tools and utilities market and BMC's delayed introduction of new software products.
  - International license revenues increased 57% to $50.2 million, due primarily to the strong performance of German operations, the company's largest international office, and to significant growth of its French, Danish, and Japanese operations as these newer offices added sales personnel and became more productive.
- Maintenance revenues increased 50% to $78.9 million due to continued growth in the base of installed products and high maintenance renewal rates.

Research and development costs were $24.1 million (13% of total revenues) in fiscal 1992, $19.4 million (15% of total revenues) in fiscal 1991, and $12.9 million (15% of total revenues) in fiscal 1990.

Employees

As of March 31, 1992, BMC had 782 full-time employees, segmented as follows:

Sales and marketing	250
Research, development, and support	334
Administration and finance	198
	782

The company currently has 809 employees.

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Competition

Competition comes largely from IBM and several independent software vendors. Although IBM is a direct competitor and represents potential competition, its systems software products have provided opportunities for BMC.

- Some BMC products, including two of its largest selling products, LOADPLUS™ and DELTA/IMS, are essentially improved versions of IBM utilities that are provided as part of integrated systems such as IMS/DB and DB2 data bases and IMS/TM and CICS.
- BMC faces additional competition on a smaller scale from more recent entrants to the utilities market, as well as from hardware vendors.

Key Products and Services

BMC derives 100% of its revenue from product licenses and software maintenance fees.

- License fee revenue is primarily from one-time perpetual licenses and, to a substantially lesser extent, from annual lease and monthly rental charges.
- Maintenance fees have increased as a percentage of total revenues due to growth of the customer base, high maintenance renewal rates, and increased maintenance fees resulting from a trend among customers to upgrade to more powerful CPUs.

A three-year source of revenue summary showing license and maintenance revenue percentages follows:

BMC SOFTWARE, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
PRODUCT LICENSES AND MAINTENANCE FEES
($ millions)

	FISCAL YEAR					
	3/92		3/91		3/90	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
Product licenses (a)	$105.7	57%	$75.4	59%	$53.3	62%
Maintenance	78.9	43%	52.8	41%	32.3	38%
TOTAL	**$184.6**	**100%**	**$128.2**	**100%**	**$85.6**	**100%**

(a) Includes CPU upgrade fees representing 23%, 17%, and 11% of total revenue in fiscal 1992, 1991, and 1990, respectively.

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As of March 31, 1992, BMC had licensed over 14,000 copies of its products to more than 5,000 customers worldwide.

BMC currently markets 55 products (as shown in the exhibit) comprising nine product groups:

- The Masterplan™ for DB2 products include products for change management, administration, performance monitoring, DASD data compression, and utility management. The company had an early start in this market with seven products released in the first two years of the product line.

- IMS Database Utilities products streamline the recovery and reorganization of large, structured IMS data bases, providing enhanced data integrity and reduced DASD space. Many of the products replace standard utilites included in IBM's integrated IMS/DB package.

- IMS/TM Enhancements Series products expand the capabilities of the IMS data communication product.

- IMS Application Enhancements Series products improve the performance of batch applications.

- The Trimar Fast Path Series, for the IMS/VS Fast Path subsystem, is used in very large, transaction-intensive data centers.

- The CICS Integrity Series allows on-line access to batch applications and provides data integrity and recovery functions for CICS/VSAM data.

- Network Performance Series products are designed to improve users' response times in communications between IBM mainframes and 3270 terminals or PCs.

- DASD Data Compression Series products reduce the space required to store data on direct access storage devices and can eliminate the need for additional disk drives.

- The VSE Series of products was developed for DL/1 data bases and includes products also found in other BMC product lines.

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EXHIBIT

BMC SOFTWARE PRODUCTS

PRODUCT GROUP/PRODUCT NAME	PRODUCT GROUP/PRODUCT NAME
Masterplan™ for DB2 - Change Manger - Catalog Manager - Alter - DASD Manager - Unload Plus - Loadplus® - Reorg Plus - Copy Plus - Recover Plus - Activity Monitor - Opertune™ - Data Packer® **IMS Database Utilites Series** - Data Packer®/IMS *IMS Integrity Solutions:* - Database Integrity Plus - Pointer Checker Plus *IMS Backup and Recovery Solutions:* - Image Copy Plus - Recovery Plus *IMS Reorganization Solutions* - Unload Plus - Loadplus® - Prefix Resolution Plus - Secondary Index Utility **IMS/TM Enhancements Series** - Delta IMS® DC - Delta IMS® DB/DC - Delta IMS Virtual Terminal - Local Copy Plus **IMS Application Enhancements Series** - Batch Control Facility - BMP Restart	**Trimar Fast Path Series** - Trimar Fast Path Analyzer - Trimar Fast Path Unload/Reload - Trimar Fast Path Online Utilites - Trimar Online DEDB Image Copy - Trimar Fast Recovery Control - Trimar Restart Control Facility - Rimary DEDB Secondary Index Facility **CICS Integrity Series** - VSAM Access/CICS™ - Recovery Plus for CICS (MVS) - Recovery Plus for CICS (VSE) - Recovery Plus for VSAM (MVS) - Recovery Plus for VSAM (VSE) - Journal Manager Plus (MVS) - Journal Manager Plus (VSE) **Network Performance Series** - Ultraopt™/VTAM - 3270 Superoptimizer®/IMS - 3270 Superoptimizer®/CICS - 3270 Superoptimizer®/CICS for VSE - 3270 Superoptimizer®/VM - 3270 Optimizer/IMS - 3270 Optimizer/CICS - 3270 Optimizer/CICS for VSE **DASD Data Compression Series** - Data Packer®/OS - Data Packer®/VSAM - Data Packer®/Fast Path **VSE Series** - Reorg Plus for VSE - Reorg Plus for VSE with Secondary Index feature - Backup and Verification for VSE

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A three-year source of revenue summary by product group follows:

BMC SOFTWARE, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
PRODUCT GROUPS
($ millions)

	FISCAL YEAR		
ITEM	3/92	3/91	3/90
IMS/DB Utilities (a)	43%	43%	43%
MasterPlan DB2 Products	25%	21%	15%
Network Performance	11%	14%	20%
IMS/TM Enhancements	9%	10%	12%
DASD Data Compression	6%	7%	8%
Trimar Fast Path	4%	5%	2%
CICS Integrity	2%	--	--
TOTAL	**100%**	**100%**	**100%**

(a) This product group includes LOADPLUS™, BMC's most successful product, which accounted for 10%, 12%, and 13% of total revenue in fiscal 1992, 1991, and 1990, respectively.

In June 1991, the company announced that all new products and product enhancements would be compliant with the Common User Access (CUA) interface, which is part of IBM's SystemView mainframe systems management program. The first CUA-compliant product released was version 2.0 of DATA PACKER™/IMS.

BMC "value prices" its software--each product is priced based on the benefit (potential savings) the product represents for the customer.

- Mainframe software products (all but the Network Performance products) are priced based on the power of the CPU it will run on (measured in MIPS). Discounts are offered for multiple copies of a product.
  - This pricing strategy has insulated the company from the gradual decline in the number of mainframe computers in the U.S., but takes advantage of the increase in mainframe computing power as customers increase their total MIPS.
- Network Performance products are priced based on the number of terminals in the network.

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- Price ranges vary considerably by product, and are based on the value pricing factors described above.

Industry Markets

BMC's primary users are Fortune 500 industrial corporations and other large financial, telecommunications, and government organizations.

The company describes its customer base as comprising IBM's largest customers--94% of the *FORTUNE* Industrial Top 50 and 87% of the Top 100.

Geographic Markets

Approximately 56% of BMC's fiscal 1992 revenues were derived from North America and 44% from international markets. A three-year geographic source of revenue summary follows:

BMC SOFTWARE, INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	3/92		3/91		3/90	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
North America	$103.2	56%	$77.5	60%	$54.0	63%
Europe	70.4	38%	45.1	35%	27.2	32%
Other	11.0	6%	5.6	5%	4.4	5%
TOTAL	**$184.6**	**100%**	**$128.2**	**100%**	**$85.6**	**100%**

BMC's corporate headquarters are in Sugar Land (TX). Additional research and development offices are in Austin (TX) and Englewood (CO).

- The company has no regional sales offices because its products are sold through telemarketing and direct mail.

- Technical support for each product is provided by its product development team.

International sales are supported by eight wholly owned sales (telemarketing) and support subsidiaries in Australia, Denmark, the U.K., France, Germany, Italy, Japan, the Netherlands, and Spain.

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- The company also markets its products through independent agents in Argentina, Brazil, Chile, Hong Kong, Peru, Singapore, South Korea, Taiwan, Uruguay, and Venezuela.

Computer Hardware and Software

BMC maintains the following hardware and software at its development and support data center:

- IBM ES 9000-720 processor
- 360 gigabytes of DASD comprised of IBM, Amdahl, and HDS systems
- IBM SNA network with high-speed T1 lines
- IBM Information Network
- Operating systems and data bases as follows: 19 MVS, 10 VM, and 3 VSE systems; 25 IMS and 18 DB2 subsystems
- All releases of MVS, CICS, DB2, IMS, TSO, XA, ESA, VM, VSE, and VTAM are supported.

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Company Profile

A Publication from INPUT's Vendor Analysis Program

April 1994

Boeing Information Services

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President: Stan Beckelman
7990 Boeing Court
Vienna, VA 22183
Phone: (703) 847-1100
Fax: (703) 847-1124

Status:	Subsidiary
Parent:	The Boeing Company
Employees:	+3,500
Revenue:	$ 505,000,000
Fiscal Year End:	12/31/93

Key Points

- Effective January 1, 1994, the operations of Boeing Computer Services were restructured and Boeing Information Services was established as a subsidiary of The Boeing Company to market information services outside Boeing. Stan Beckelman was appointed president of the new unit. Mr. Beckelman was formerly vice president of information services at Boeing Computer Services.
- Boeing Information Services is exclusively focused on providing services to the federal government. Boeing Information Services has withdrawn from the commercial marketplace for now, having fulfilled existing obligations to customers, partners and suppliers.
- Boeing Information Services is one of six prime vendors awarded the Defense Information Systems Agency (DISA) $935 million Defense Enterprise Integration Services (DEIS) contract. The contractors are guaranteed $10 million to be divided evenly, with the remaining contract amount open to competition between the companies.

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Company Description

Boeing Information Services currently provides professional services, telecommunications, program management, systems integration and systems operations services to federal government clients.

- Boeing Information Services operated as a unit of Boeing Computer Services until January 1, 1994 when it was established as a separate subsidiary to reflect the company's increased focus on external information services activities.

- Boeing Computer Services was established in May 1970 to consolidate 13 separate computing organizations within Boeing. The division began with approximately $250 million of computing equipment and a staff of 2,700. Boeing Computer Services provides a range of information services to its parent company, including development and maintenance of applications software, operations of data centers and associated data networks, telecommunications services as well as procurement and maintenance of computer hardware. Today, the division employs more than 12,000 professionals located through the U.S. and other countries and manages more than $1.7 billion worth of company-owned telecommunications and computing equipment--from desktop computers to supercomputers.

Boeing Information Services operates as a subsidiary of The Boeing Company, one of the world's major aerospace firms. Boeing, headquartered in Seattle (WA) with more than 111,000 employees worldwide, generated revenue of $25 billion in 1993.

Strategy

Boeing Information Services' strategy is to remain profitable and continue to compete for selected federal contracts for information services in the areas of systems integration, support services and task order support.

Financials

Boeing Information Services' revenue for 1993 was $505 million, a 7% increase over estimated 1992 revenue of about $470 million. A four-year summary of revenue follows:

Boeing Information Services
Four-Year Revenue Summary
($ Millions)

	Fiscal Year			
Item	1993	1992	1991	1990
Revenue	$505	$470	$325	$320
• Percent change from previous year	7%	44%	2%	N/A

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Boeing Information Services management attributes revenue growth to significant growth in its government business that more than offsets the steady decline in commercial contracts.

Market Financials

Virtually 100% of Boeing Information Services' revenue is derived from the federal government. Major efforts are directed toward NASA, the Department of Defense and selected civil agencies.

Geographic Markets

One hundred percent of Boeing Information Services' revenue is derived from the U.S.

Operations and Structure

Boeing Information Services is headquartered in Vienna (VA). A data center in Huntsville (AL) supports NASA work and the data center in Vienna supports multiple government clients.

Boeing Information Services also operates out of various client locations.

Employees

Currently, Boeing Information Services has approximately 3,500 employees.

Key Products and Services

INPUT estimates 50% of Boeing Information Services' 1993 revenue was derived from professional services, 40% from systems integration and the remaining 10% from systems operations.

Boeing Information Services is a leader in managing and developing large, complex integrated information systems.

The subsidiary provides customer-designed, computer-based information and communications systems for government customers--including hardware, software and network systems. This ranges from designing small local-area networks and developing software applications, to managing large turnkey data communications networks and total computing facilities.

Major professional services and systems integration contracts include the following:

- During 1991, Boeing Information Services was named by the U.S. Army Reserve Component to implement the Reserve Component Automation System (RCAS) contract. RCAS has a total contract value of $1.8 billion over 12 years and is aimed at enhancing the readiness and mobilization capabilities of the Army National Guard and Army Research Units. Plans call for Boeing Information Services to install the RCAS at 4,700 Army Reserve and Guard locations.

- Boeing Information Services is one of six prime vendors awarded the Defense Information Systems Agency (DISA) $935 million Defense Enterprise Integration Services (DEIS) contract. The contractors are guaranteed $10 million to be divided evenly, with the remaining contract amount open to competition between the companies. The contracts are designed to move the Department of Defense away from independent computer systems and toward an integrated information

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network. In addition to Boeing Information Services, other vendors selected include Unisys, Martin Marietta, EDS, CSC and BDM Federal.

- During 1992, Boeing Information Services was awarded a subcontract by Grumman to provide basic computing and telecommunications systems to NASA's Johnson Space Center in Houston. Boeing Information Services has been providing services to NASA since the early 1980s.

- One of Boeing Information Services' largest federal contracts was the NASA Technical Management Information System (TMIS). Under this contract, Boeing Information Services provided systems integration services for the Space Station Freedom program.

- Boeing Information Services is also the prime contractor on the IRS Budget Preparation System and the Inventory Control and Distribution System.

- Under a five-year, $105 million contract awarded in 1990, Boeing Information Services was selected to provide a range of information services to the Naval Weapons Center, China Lake (CA).

- Boeing Information Services was a subcontractor to AT&T for Network A of FTS 2000. It provided management systems for the largest procurement in telecommunications history.

- Boeing Information Services is currently recompeting on the PrISMS (Program Information Systems Mission Services) contract for NASA's Marshall Space Flight Center to provide institutional support, program support and communications network management services.

Boeing Information Services also provides systems operations (facilities management) services to various government agencies. Contract examples include the following:

- The Westinghouse Hanford Company and Boeing Information Services have a $800 million per year Operations and Engineering contract with the Department of Energy (DOE) at the Hanford nuclear power facilities.

- As prime contractor, Westinghouse is responsible for nuclear engineering and reactor management. Boeing Information Services, as a subcontractor to Westinghouse, is providing processing, telecommunications and information services support.

- Boeing Information Services at Richland (WA) has been providing services to the DOE at Hanford since 1976. During 1992, Boeing Information Services at Richland was awarded contract extensions on the Westinghouse/DOE contract.

- Boeing Information Services is also managing data processing facilities for the Department of Education and NASA.

Boeing Information Services continues to provide education and training professional services for its clients.

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- Boeing Information Services offers a catalog of more than 250 computer training and management/communications courses. The courses cover a range of topics for managers, analysts, programmers, beginners and users. Classes are regularly scheduled in Seattle, Philadelphia and Wichita. Course videotapes can be purchased for in-house use.

- Customized training services are also available. Boeing Information Services can provide complete computer training program management, including course development, on-site instruction, scheduling and training record maintenance.

Marketing and Sales

Boeing Information Services markets its services to the government through direct sales by responding to Requests for Proposals (RFPs) from the federal government.

Alliances

Boeing Information Services has no permanent ongoing alliances. The company does form relationships with various vendors on a contract-by-contract basis, depending on the needs of its clients.

Competitors

Boeing Information Services' major competitors include Computer Sciences Corporation, Electronic Data Systems, Martin Marietta Information System, Grumman Data Systems and Services Group, Loral and PRC.

Assessment

Boeing Information Systems' major strength is its extensive experience and background in telecommunications.

A major challenge for the company is to successfully compete for the increasing number of contracts related to multiagency systems being proposed in all areas of the federal government.

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INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

March 1996

Boole & Babbage, Inc.

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Chairman: Franklin P. Johnson, Jr.
President & CEO: Paul E. Newton
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San Jose, CA 95134-1933
Phone: (408) 526-3000
Fax: (408) 526-3055
Internet: Http://www.boole.com

Boole & Babbage

Status:	Public
Employees:	769 (3/96)
Revenue:	$154,367,000
Fiscal Year End:	9/30/95

Key Points

- Boole & Babbage is a leader in enterprise automation software for managing distributed systems. The company is committed to supporting open systems and the growing client/server market to help IS organizations reduce costs and increase systems availability.
- COMMAND/POST™, the company's flagship enterprise automated systems management product, provides a central point of control for managing and automating all computer networks and applications in the IS enterprise.
- The company continues to define its leadership role in the large-systems arena with its Parallel Sysplex-ready offerings based on its BBI™ distributed systems architecture.

Company Description

Boole & Babbage, founded in 1967, provides systems software solutions for help desk, automation, operations, network administration, system administration and storage management. In addition to its proprietary products, the company also distributes certain third-party products that complement its software product line and provides consulting and processing services.

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LOGO is a registered trademark of Boole & Babbage, Inc.

The company has more than 12,500 products installed at more than 5,000 sites worldwide.

The company announced separate 3-for-2 stock splits in November 1994 and December 1995.

Structure and Organization

Boole & Babbage automated enterprise management products are split into four categories—the COMMAND/POST product family, the Ensign™ product family, the MainView™ systems management line of products, and Storage Management and Automation products (developed and supported through the Boole & Babbage Storage Division).

Boole & Babbage has 42 offices in 26 countries worldwide, including three data centers and four development labs. The company has corporate headquarters in San Jose (CA) and European headquarters in Dublin (Ireland).

- The company's North American offices are in Atlanta (GA), Chicago (IL), Dallas and Houston (TX), Los Angeles, El Segundo and San Francisco (CA), New York (NY), O'Fallon (IL), Warwick (RI), Saddle Brook (NJ), Toronto (Canada) and Reston (VA).
- Boole & Babbage Europe, the company's European subsidiary, has offices in Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Norway, Portugal, Spain, Sweden, Switzerland, the Netherlands and the U.K.
- Boole & Babbage International is a subsidiary based in Australia and Japan that markets and supports the company's products in the Pacific Rim.
- Representative offices are in Bangkok, Bogota, Buenos Aires, Caracas, Guayaquil, Hong Kong, Istanbul, Kuala Lumpur, Lima, Malaysia, Mexico City, Rio de Janeiro, Riyadh, Santiago, Sao Paulo, Seoul, Singapore, South Africa, and Tel Aviv.

Company Strategy

The Boole & Babbage mission is to help customers increase availability in their organizations by managing systems for all types of computers and communications. The company's strategy is to provide enterprisewide management products that automate the task of monitoring, administering, diagnosing and correcting problems in the entire enterprise—from the mainframe to the desktop, including storage management.

The company's comprehensive family of automated enterprise management software covers all elements of the computer network and tracks mainframe and minicomputer operating system performance. It allows consistent administration of distributed client/server systems on diverse platforms, from a central point of control.

The corporate mission is focused on enterprise automation through internal product development and strategic partnership acquisitions that include integration with complementary products, as well as distribution agreements and reseller arrangements.

Boole & Babbage has made its UNIX-based COMMAND/POST product line the keystone of its strategy for addressing the client/server market. The COMMAND/POST open architecture provides the ability to have two-way communications with virtually any device in the enterprise computing environment.

Boole & Babbage is also committed to making automation easier for its clients through product design and standardizing on the REXX language for automation scripts.

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Scripts for the COMMAND/POST family of products are based on REXX.

In support of migrations to the Parallel Sysplex, Boole & Babbage is delivering a systems management architecture that can deal with traditional mainframes and the new Parallel Sysplex.

- MainView and ProSMS™ systems management products will support IBM Parallel Sysplex Architecture offerings. In addition, MainView products will support the participating transaction products in IBM's new Parallel Sysplex environment.

- Boole & Babbage "plex-ready" products include MV MANAGER™ for MVS and CMF* MONITOR, built on the Boole & Babbage Intercommunication Facility (BBI) architecture. BBI technology provides the strategic advantage of Single System Image, which allows users to treat and manage a collection of parallel systems and subsystems as if they were a single entity.

- In 1996, Boole and Babbage's goal is to stay ahead of its customers' needs as their client/server systems transition from specialized-use status to full enterprise-wide solutions.

Financials

Fiscal 1995 revenue reached $154.4 million, a 17% increase over fiscal 1994 revenue of $131.8 million. Net income rose 36%, from $10.2 million in fiscal 1994 to $13.9 million in fiscal 1995. A five-year financial summary follows:

Boole & Babbage, Inc.
Five-Year Financial Summary (a)
($ Millions, except per-share data)

	Fiscal Year				
Item	9/95	9/94	9/93	9/92	9/91
Revenue	$154.4	$131.8	$118.2	$110.5	$100.8
• Percent change from previous year	17%	12%	7%	10%	10%
Income before taxes	$19.9	$14.8	$11.2	$7.7	$(1.8)
• Percent change from previous year	34%	32%	45%	173%	N/A
Net income (loss)	$13.9	$10.2	$7.6	$5.3	$(1.2)
• Percent change from previous year	36%	11%	43%	542%	N/A
Earnings (loss) per share (b)	$1.21	$0.94	$0.70	$0.53	$(0.13)
• Percent change from previous year	29%	(51%)	32%	508%	N/A

(a) Fiscal years 1991 through 1993 restated to reflect adoption of FAS 109, accounting for income taxes.

(b) Restated to reflect 3-for-2 stock splits in November 1994 and December 1995.

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Product development and support costs rose less than 1% in fiscal 1995 and represented 16% of total revenue, compared to 18% of revenue in both fiscal 1994 and fiscal 1993.

Revenue Analysis by Product Line

Approximately 52% of Boole & Babbage's fiscal 1995 revenue was derived from systems software product licenses, 46% from software maintenance, and 2% from consulting and processing services. A three-year summary of source of revenue follows:

Boole & Babbage, Inc.
Three-Year Source of Revenue Summary
($ Millions)

	Fiscal Year					
	9/95		9/94		9/93	
Product/Service	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
Product licensing	$80.2	52%	$64.9	49%	$53.9	46%
Maintenance fees	70.7	46%	64.3	49%	60.7	51%
Services and other	3.5	2%	2.6	2%	3.6	3%
Total	$154.4	100%	$131.8	100%	$118.2	100%

Boole & Babbage attributes fiscal 1995 results to the following:

- The client/server group had the highest growth rate, at 43%, and represented 11.5% of total licensing revenue. The company expects high growth in this group in 1996, as products such as Ensign and Stage3 begin to produce greater revenue.
- Currently, Boole & Babbage derives approximately 86% of licensing revenue from mainframe-based technologies. Plex products revenue grew 16% in 1995.
- Revenue from mainframe products grew 24% in 1995, principally as a result of built-up demand for mainframes, which produced several larger orders. The company does not expect this level of growth in mainframe products in 1996.

Interim Results

Revenue for the three months ending December 31, 1995 reached $40.1 million, a 4% increase over $38.6 million for the same period in 1994. Net income was $4.3 million, compared to $3.3 million for the same period a year ago.

Besides strong performance in its traditional markets, client/server products showed 52% growth during the quarter.

Mainframe product sales declined by 4% from the same period the prior year.

Market Financials

Boole & Babbage products are aimed at user organizations running large, mixed-vendor networks.

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The typical Boole & Babbage user is a member of the information technology staff at a large corporation—vice president of information services, data center manager, MIS manager, help desk technician, or network and systems operations or administration support person.

Boole & Babbage customers are large corporate and governmental organizations. The company has clients in manufacturing, commercial banking, insurance, communications, retailing, transportation, utilities, health care and education, as well as federal, state and local government.

Geographic Markets

Approximately 37% of Boole & Babbage's fiscal 1995 revenue was derived from the U.S. and Canada, and the remaining 63% from international sources. A three-year geographic source of revenue summary is shown below.

- Domestic software licensing increased 6.6% during fiscal 1995, compared to 8.8% in fiscal 1994. This increase is credited to strong growth from the telesales group, partially offset by a flat year for the field sales force.

- International revenue increased 33% in fiscal 1995, compared to 28% in fiscal 1994. The increase is attributed to strong growth in South America and favorable exchange rates.

Boole & Babbage, Inc.
Three-Year Geographic Source of Revenue Summary
($ Millions)

	Fiscal Year					
	9/95		9/94		9/93	
Geographic Market	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
U.S. and Canada	$56.7	37%	$54.4	41%	$53.9	46%
Europe	74.2	48%	61.0	46%	54.2	46%
Other	23.5	15%	16.4	13%	10.1	8%
Total	$154.4	100%	$131.8	100%	$118.2	100%

Acquisitions

In January 1996, Boole & Babbage acquired Storage Automation Facility (SAF) from Real Solutions of Bay City (MI).

- Boole & Babbage will market and support the product acquired in the transaction through its Storage Division, under the name of SG-Auto™.

- SG-Auto fully automates the monitoring of the storage subsystems and automatically initiates threshold-driven storage management procedures based on conditions in the storage subsystem in addition to time.

Employees

As of December 31, 1995, Boole & Babbage had 754 employees. As of March 1996, the company had 769 employees, including 447

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in North America, and 322 in foreign countries.

Key Products and Services

Boole & Babbage currently markets more than 40 proprietary and third-party systems software products that span the entire computing enterprise. The company's automated enterprise management products are offered in four categories—the COMMAND/POST product family, Ensign™, the MainView systems management line of products and Storage Management and Automation products.

COMMAND/POST Product Family

COMMAND/POST is an enterprise-wide management system for complex heterogeneous environments. It integrates, consolidates and simplifies system and network operations control of applications, host, WAN, LAN, voice, supercomputer, and minicomputer into a central point of control.

- COMMAND/POST is a graphical, client/server software package that runs on UNIX-based Sun Microsystems workstations. It works with Hewlett-Packard's OpenView, IBM SystemView, and Sun Microsystems' Solstice, and runs on IBM RS/6000 platforms.
- COMMAND/POST options include:
  - PhonePoint—extends the operations/Help Desk to any touchtone phone
  - COMMAND/POST *connect MVS*—for full alert management, outboard console emulation and automation of MVS systems
  - COMMAND/POST *connect Ensign*—combines Ensign with the COMMAND/POST central point of control, adding alert management, system administration, and localized automation of UNIX, Novell NetWare and Windows NT systems
- When used in conjunction with AUTOCOMMAND™ automation facilities, COMMAND/POST automatically pinpoints and solves network problems such as node failure or the rerouting of data over a less congested path.

COMMAND/POST PinPoint displays system, network and application alert messages on any network-attached Windows-based desktop in the enterprise to give other divisions in IS a view of systems status.

Ensign

Ensign provides event management and systems administration for distributed, heterogeneous client/server computer networks.

- Like COMMAND/POST, Ensign also uses a distributed customizable console to integrate alert and system administration functions. From the console, users can identify problems and apply corrective actions. Through an integration toolkit, the console can also be used to launch and provide event management for third party applications, including software distribution, scheduling and trouble ticketing, as well as customers' native applications.
- Using intelligent agents, Ensign brings automation to 13 different versions of UNIX, as well as Novell NetWare and Windows NT servers, expanding its reach to the majority of client/server environments in operation today. Agents can capture alarms from these three different environments and forward them

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to the Ensign console, as well as COMMAND/POST. HP OpenView, IBM SystemView and Sun SunNet Manager. Through automation, Ensign can also respond to critical alerts by notifying appropriate staff through automatic E-mailing or paging.

MainView Systems Management Products

MainView is the Boole & Babbage product family for performance monitoring management and automation in MVS systems. MainView includes Boole & Babbage systems management software for IBM MVS, IMS, DB2, CICS, and DBCTL operating systems.

With MainView *for MVS* software products, users can maximize system availability and speed up application response times in their IBM MVS mainframe systems environments.

- MV MANAGER™ *for MVS* tracks system performance for MVS/XA, MVS/ESA and Parallel Sysplex environments.
- AutoOPERATOR™ *for MVS* automatically generates alerts to notify systems managers of system troubles. It also contains built-in solutions to solve common system problems such as system failure.
- MainView Vistapoint provides a panoramic view of application service levels across multiple subsystems on the same or different hosts.
- MainView *for MQSeries* provides performance and automation of IBM MQSeries messaging middleware to increase availability.
- InTune provides an interactive view of the internal performance of MVS applications to pinpoint program delays.

MainView products for IMS, DB2, CICS, and DBCTL are as follows:

- MainView *for IMS*
- MainView *for DB2*
- MainView *for CICS*
- MainView *for DBCTL*

The MainView product line architecture is based on BBI, a systems management architecture that allows MainView products to manage service levels for applications executing in a distributed environment.

- MainView complements two emerging standards for systems management software: IBM's SystemView and the Open Software Foundation's Distributed Management Environment (DME). Boole & Babbage is committed to developing MainView products that conform to SystemView.

Boole & Babbage also markets various third-party products that complement the MainView product line for comprehensive data center management. Companies that provide products for the European and international markets include Diversified Software Systems, 4th Dimension Software, Simware and Tone Software.

Storage Management and Automation Products

The Boole & Babbage Storage Division, previously known as EMPACT Software, develops storage automation products that fine-tune and optimize storage use.

As IBM's Storage Management Subsystem (SMS) technology emerges as the new data-storage standard, Boole & Babbage offers a family of automated storage products for this environment called ProSMS™.

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- ProSMS automates the tedious manual tasks of converting storage formats, doing data backups and allocating storage space. It views SMS as another subsystem, such as CICS.

- ProSMS products include StorageGUARD™ for storage management, EasySMS™ for converting and enhancing disk formats, EasyPOOL™ for standards compliance, StopX37/II™ for dynamic recovery and HIPER-CACHE™ and PAGE-MANAGER™ for disk performance optimization.

- ProSMS Version 3.4, released in August 1995, features more than a dozen new interactive on-line reports and corrective commands for simplified management and increased efficiency of DFHSM.

Boole & Babbage has exclusive distribution rights to Emprise Software Stage3, a solution for centralized backup storage for distributed systems. It works with existing LAN backup tools and transfers the backed-up data to a mainframe for storage and management through hierarchical tools.

In November 1995, the company released Stage3 for the Microsoft Windows NT operating system, offering an enterprise, LAN-to-mainframe backup solution. Stage3 for NT is the only NT-native solution currently available.

Software Support and Other

The company offers product maintenance, which includes enhancement and updating of product capabilities to accommodate changes in a customer's hardware and software.

- One year of maintenance is included in all of the company's licenses.

- Thereafter, optional maintenance renewals are available annually for 15% to 20% of the current product price.

Boole & Babbage Computer Services provides utility processing to customers from its data center in San Jose.

Clients

Boole & Babbage products are targeted to user organizations running large, mixed-vendor networks. Typically, a Boole & Babbage user is a member of the information staff at a large corporation—an MIS manager, a help desk technician or a network and systems operator or administrative support person.

Boole & Babbage serves more than 5,000 customers from a variety of industries worldwide. Among Boole & Babbage customers are American Airlines, Alcatel, Amoco, AT&T, Banc One, Barclay's, Boeing, Browning-Ferris Industries, Chrysler Corporation, CITGO Petroleum, Home Depot, Metropolitan Life, Motorola Incorporated, Pacific Bell, Salomon Brothers, Shell Oil, Sprint, Stone Container Corporation, Traveler's Insurance and Wells Fargo.

Marketing and Sales

The company sells its products domestically through its own distribution division, Boole & Babbage North America. In Europe, the company's products are sold through its European subsidiary, Boole & Babbage Europe. Boole & Babbage International markets products in the Pacific Rim. Ensign is sold through the VAR channel.

Boole & Babbage also has distributors in Latin America, Asia, and the Middle East.

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Alliances

To ensure that Boole & Babbage benefits by cooperation with leaders in the industry, the company has implemented several types of relationships.

Development Partnerships

Boole & Babbage is working with IBM to develop on-line transaction processing management systems and software for parallel processing.

Boole & Babbage's BBI technology is at the core of the IBM CICSPlex System Manager/ESA (CICSPlex SM). CICSPlex SM, which is aimed at managing complex collections of CICS systems, is the initial outcome of a three-year joint development agreement between Boole & Babbage and the IBM Hursely Laboratory (U.K.).

Boole & Babbage entered into a joint venture to form a subsidiary company called Joint Systems Technologies (JST), with offices in Tokyo and Osaka.

Marketing Partnerships

Boole & Babbage has several agreements relative to its COMMAND/POST product family, including an OEM agreement with Hewlett-Packard for distribution of HP OpenView Network Node Manager in conjunction with COMMAND/POST.

Boole & Babbage has a distribution agreement with Shany, Inc. that allows Boole & Babbage to offer AlertVIEW to its customers. AlertVIEW is a network application management program that monitors PC LAN applications and provides alerts, automated responses and automated problem prevention for DOS, Windows and OS/2 workstations connected to NetWare, LAN Manager and LAN Server. When used together, AlertVIEW will forward LAN application events to COMMAND/POST.

The company also has an agreement with JBM Electronics to distribute protocol converters that allow console connectivity, emulation and automation of the full line of Unisys mainframe processors using COMMAND/POST.

In addition, EMPACT Software, the Storage Automation Division of Boole & Babbage, has partnered with IBM to help data centers achieve automated storage management through IBM's Data Facility Storage Management Subsystem (DFSMS) platform.

The Federal Government Program is a sharply focused distribution channel attuned to the needs of IS managers within federal bureaus and departments.

The Business Partners Program charter is to develop a new VAR channel for the company's client/server products for event management of distributed UNIX, Novell NetWare and Windows NT environments, as well as to initiate new systems integrator partnerships.

In addition, the company has partners in the following applications areas their solutions address when used in combination with Boole & Babbage products:

Frameworks—Hewlett-Packard (OpenView), IBM (SystemView), Sun Microsystems (Solaris)

Help Desk—Remedy Corp. (Action Request System, help desk/trouble ticketing), Help/Systems (ROBOT products, automated AS/400 management), Answer Systems (Apriori, help desk/problem resolution, support management), Quintus (HelpQ, trouble ticketing), Texas Digital (QuickCOM,

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visual message alert system), and Peregrine ServiceCenter

Ensign Synergy—OCS, Tangram Enterprise Solutions, Inc., Remedy Corp.

Supplier Relationships

Boole & Babbage uses systems from various vendors to build its client/server management products, including those of Sybase and Sun Microsystems.

Competition

Mainframe software competitors include Candle Corporation, and Landmark.

COMMAND/POST competitors are MAXM and OSI.

Ensign competitors include Computer Associates (CA Unicenter for UNIX), OpenVision and Tivoli.

INPUT Assessment

Boole & Babbage is well positioned with a breadth of product offerings in one of the strong growth areas for systems software—systems management software.

Boole & Babbage's key strength is offering systems software products that effectively manage the volatility of mission-critical applications across multiple platforms.

In addition, Boole and Babbage's products can touch every element of the enterprise, providing a focal point for management of the distributed enterprise from mainframe to desktop.

Challenges for the company include:

- Growing nontraditional mainframe product revenue (client/server and parallel processor) as quickly as possible
- Building a VAR channel to sell Ensign as a stand alone product

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Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

January 1997

Booz·Allen & Hamilton

Chairman & CEO: William F. Stasior
President, Worldwide Commercial Business: Brian N. Dickie
President, Worldwide Technology Business: Ralph W. Shrader
8283 Greensboro Drive
McLean, VA 22102
Phone: (703) 902-5000
Fax: (703) 902-3333
Internet: http://www.bah.com

Status:	Private
Employees:	7,100 (12/96)
Sales:	$1,100,000,000
Fiscal Year End:	3/31/96

Key Points

- Booz·Allen & Hamilton (Booz·Allen) is an international management and technology consulting firm.
- In September 1996, Booz·Allen won the General Services Administration's Telecommunications Support Contract 2 (TSC2), with a potential value of $620 million. The firm is providing full telecommunications life-cycle support, including planning, analytical, acquisition, installation, integration, implementation, operations, and maintenance support for any federal department and agency worldwide.
- In June 1996, Booz·Allen won a five-year, $28 million contract to support the DoD's Anti-Drug Network (ADNET) program. The firm is providing systems and communications engineering; hardware and software integration, test, and evaluation; and deployment and installation services.

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- Booz-Allen opened offices in Mumbai, Pretoria, Seoul, and Shanghai in 1996.

- In June 1996, Booz-Allen won a Department of Transportation (DOT) contract to provide a range of information technology security services, including information, computer, and telecommunications security, incident response, and virus detection.

- During 1996, Booz-Allen launched the first Global Business Book Awards in conjunction with *The Financial Times* and completed the first year of publication of its quarterly *Journal of Strategy & Business*.

- In the summer and fall of 1996, Booz-Allen conducted two studies on the future of Internet banking in the U.S. and Europe.

- The firm also conducted research on a variety of subjects, including innovation, value engineering, restructuring for growth, and IT transformation.

Company Description

Booz-Allen, founded in 1914, is a privately held global management and technology consulting firm providing services in strategy, systems, operations, and technology to large industrial and service corporations worldwide, departments and agencies of the U.S. federal government, and major foreign institutions and governments.

Organization and Structure

Booz-Allen, headquartered in McLean (VA), is a private corporation with more than 80 offices on six continents.

Domestic offices are located in Albuquerque (NM); Arlington, Chantilly, Chesapeake, Dahlgren, Falls Church, McLean, and Vienna (VA); Atlanta (GA); Baltimore, Bel Air, Germantown, Lexington Park, Linthicum, and Seabrook (MD); Bedford and Boston (MA); Bedford, Dallas, Houston, and San Antonio (TX); Charleston (SC); Chicago (IL); Cleveland and Dayton (OH); Colorado Springs (CO); Eatontown, Florham Park, and Newark (NJ), Fayetteville (NC); Fort Walton Beach and Tampa (FL); Huntsville (AL); Los Angeles, Sacramento, San Diego, San Francisco, and Sunnyvale (CA); New York and Rome (NY); St. Louis and Weston (MO); and Warren (MI).

International offices are located in Abu Dhabi (United Arab Emirates), Amsterdam (the Netherlands), Bangkok (Thailand), Bogota (Colombia), Buenos Aires (Argentina), Caracas (Venezuela), Dusseldorf, Frankfurt, and Munich (Germany), Hong Kong, Djakarta (Indonesia), London (U.K.), Melbourne and Sydney (Australia), Mexico City (Mexico), Milan (Italy), Montreal and Ottawa (Canada), Mumbai (India), Panama City (Panama), Paris (France), Pretoria (S. Africa), Sao Paulo (Brazil), Seoul (Korea), Shanghai (China), Singapore, Tokyo (Japan), and Warsaw (Poland).

Booz-Allen is organized into two major business sectors:

- The Worldwide Commercial Business (WCB), headed by Brian N. Dickie, primarily serves major global corporations through customized multifunctional teams of professionals. This sector's primary information services-related activities are in the area of IT strategy and implementation for commercial clients.

  - Booz-Allen professionals develop expertise in the following functional areas:

    - Strategy
    - Operations Management
    - Information Technology
    - Organization/Change Management

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- WCB is organized into global industry "professional communities" providing expertise in strategy, operations, and systems technology:
  - Marketing Intensive Group (MIG)—Consumer Products, Retailing, Media
  - Financial Services Group (FSG)—Banks, Insurance, Health Care
  - Engineering/Manufacturing Group (EMG)—Aerospace, Automotive, Industrial Products
  - Energy/Chemicals Group (ECG)—Utilities, Oil and Gas, Chemicals, Pharmaceuticals
  - Communications, Computing, and Electronics Group (CCE)

- The Worldwide Technology Business (WTB), headed by Ralph W. Shrader, offers a wide range of information services-related function, primarily to government clients. Services include systems integration, software development, and systems operations management. The WTB focuses on technology, engineering, and management services and systems development/systems integration.
  - The WTB is organized by market teams focused on the defense and national security markets, the civil government market, and the international market. WTB has expertise in the areas of:
    - Information Technology
    - Telecommunications and C3
    - Transportation and Space
    - Defense and Intelligence
    - Environment and Energy
    - International Projects
    - Management Sciences

Company Strategy

Booz-Allen's mission statement is:

To be the absolute best management and technology consulting firm measured by the value we deliver to our clients and by our spirit of partnership.

The Worldwide Commercial Business' service mission is:

- To work with the world's leading corporations to help them define and achieve ever-increasing levels of world-class performance
- To help clients design and execute programs of strategic and operational change and build their capabilities for continuous improvement
- To bring to this challenge an unmatched ability to integrate global industry understanding and leading-edge expertise in the disciplines of strategy, organization, operations, information technology, and change management
- To commit both a highly trained team of talented professionals and the intellectual capital and accumulated learning of the firm to every client program
- The firm measures its performance by the magnitude of improvement in business results that it helps its clients achieve.

The Worldwide Technology Business' service mission is:

- To serve government agencies, institutions, and corporations in targeted global markets to help them achieve their missions—by making their missions Booz-Allen's mission
- To build long-term relationships and offer the full range of the firm's services to meet

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clients' needs, from mission definition through operations support

- To bring to bear superior understanding of the client's environment, coupled with outstanding functional expertise in management, technology, and engineering disciplines, to create tailored solutions to meet key client challenges

Financials

Booz-Allen's fiscal 1996 sales reached $1.1 billion.

Revenue Analysis by Product/Service

It is estimated that approximately 30% of Booz-Allen's fiscal 1996 worldwide revenue was derived from IT-related activities, segmented approximately as follows:

Professional services	60%
Systems integration	35%
Software	5%
	100%

Market Financials

Booz-Allen's fiscal 1996 worldwide revenue was segmented by industry approximately as follows:

Government	40%
Financial	15%
Manufacturing	15%
Products	10%
Computing and telecommunications	10%
Energy and chemicals	10%
	100%

Geographic Markets

INPUT estimates that approximately 70% of Booz-Allen's fiscal 1996 revenue was derived from the U.S., and the remaining 30% from international sources.

Employees

As of December 1, 1996, Booz-Allen had approximately 7,100 personnel worldwide, of which 236 were officers of the firm.

Key Products and Services

Worldwide Commercial Business (WCB)

The WCB works with major corporations on cross-functional and organizational issues often addressed by renewal, productivity improvement, innovation, growth management, acquisitions, and business restructuring.

The WCB uses an interdisciplinary approach, combining industry expertise with functional approaches. Customized multifunctional teams are formed for each client, providing expertise in operations management, information technology, applied strategy, and organization/change management.

Services offered by the WCB groups and representative examples of assignments are summarized below.

Information Technology Group (ITG)—ITG teams work with clients from a wide range of industries to help improve information technology performance. Major activities include strategic application of information systems, business process engineering, cost restructuring, executive information systems, strategic systems design, Year 2000 strategy and solutions, and systems implementation.

- In 1993, for Standard & Poor's, the ITG was asked to help in an 18-month project to build a new relational database, class library, and suite of related analysis and publications applications. Booz-Allen helped determine the data architecture, led certain development efforts, and was used to locate and bring in key consultants, such as the object architect.

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Marketing Intensive Group (MIG)—This group provides services to clients in consumer products and services, including media and communication, food and packaged goods, consumer durables, retailing and distribution, agribusiness, and transportation. The group focuses on top management business issues including corporate strategy, revenue growth programs, organizational restructuring, marketing and sales, information technology, advertising and promotion effectiveness, media deployment, and acquisition analysis.

- For a Japanese auto company, the MIG team defined and segmented the current market, identifying existing and potential brand images, and developed a strategy for a strong brand image in Europe.

Financial Services Group (FSG)—The FSG provides consulting services to assist banking, insurance, capital markets, and diversified financial services companies in build ingcapabilities to achieve step-change performance improvement, including more focused customer management, more tailored business systems, superior risk management, and organizational approaches to manage change.

- For a major financial services firm, an FSG team worked with the client's management to develop, test-market, and introduce a new kind of credit card.

Engineering/Manufacturing Group (EMG)—This group helps clients create capabilities in developing and supplying products and services, focusing on four industries: the aerospace manufacturers and airliners; automotive vehicle manufacturers, components suppliers, and the aftermarkets; engineered products such as trucks, farm equipment, locomotives, and turbines; and building products, including durables used in residential and commercial construction.

- For a major airline and its European aircraft manufacturer that was a year late in supplying its client with 40 airplanes, the EMG team was called upon to improve and implement processes to speed production.

Energy/Chemicals Group (ECG)—The ECG works with the management of leading companies in the utilities, oil and gas, chemicals, and pharmaceuticals industries on a broad range of management issues, providing strategy, marketing, organizational, operations restructuring, information systems, and technology consulting services.

- For an international cosmetics company, an ECG team was asked to assist in developing environmental policy that would establish global environmental leadership. The ECG team assessed current operations, regulatory requirements, consumer sensitivities, and possible risks posed by substances found in the client's raw materials, production processes, and packaging. The team established global standards and began the implementation process.

Communications, Computing, and Electronics Group (CCE)—With a focus on implementation, this group provides consulting on strategic and management issues and regulatory developments to telecommunications, information technology, computer, and electronics firms, as well as multimedia companies, government agencies, and institutions. The CCE group supports clients in strategic planning, restructuring, privatization, and enhancement of efficiency.

- For a leading computer hardware manufacturer, a CCE team assisted in developing a sales strategy for major customers and provided consulting in change management.

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Operations Management Group (OMG)—This group provides various services and activities, including competitive analysis, operations strategy, business process design, strategic sourcing, supply chain management, technology choice, and deployment to clients in most industries. As a result of the integration of operations and industry staff, OMG team systems, operations, and strategy solutions are customized for specific clients and are industry specific.

- For a major oil company, what began as a business management assignment evolved into an organizational change project involving the oil company's five regional units. Major structural changes began with a pilot business unit and concluded with worldwide conversion of the business two years later.

Worldwide Technology Business (WTB)

The WTB works primarily with U.S. federal government clients, focusing on technology, engineering, and management services, as well as systems development/systems integration.

Services that help WTB clients conceive, develop, and implement technology-based solutions and representative examples of assignments are summarized below.

Information Technology Services—Booz·Allen helps clients develop, test, implement, and integrate computing hardware and software systems for tasks ranging from managing billions of dollars in real property assets to applying advanced computing technologies for the performance of military surveillance and target recognition.

The firm's systems experience has been concentrated in open systems, client/server architectures, and commercial off-the-shelf (COTS) applications.

Booz·Allen's consulting orientation and system development/integration capabilities are used to provide the most appropriate solutions based on the client's objectives. Booz·Allen examines its client's mission, then, if appropriate, reengineers business processes and proceeds with systems development and integration.

WTB teams provide services in the following areas:

- Systems integration and engineering—Booz·Allen's systems-related services range from front-end strategy and architecture development to actual implementation, training, operations, and troubleshooting. The firm's life-cycle support covers nearly all software applications and operating systems, in addition to hardware platforms from workstations and PCs to mainframes and supercomputers.
- Computer security—Booz·Allen is a leader in information security architecture and the design and development of software, hardware, and procedural solutions to guard information and communications. The firm provides INFOSEC support in areas such as multilevel security systems, electronic key management systems, and secure workstations.
- Neural networks—Booz·Allen holds patents for neural network software tools and has pioneered neural network applications for military target recognition, tumor detection, bullet matching, and financial services industry risk assessment.
- Object-oriented design—The firm develops object-oriented software solutions for clients migrating away from older, structured languages.
- High-performance computing
- Software development

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- Database systems
- Computer-aided facilities management
- Network and systems management
- Information engineering
- Artificial intelligence

The firm's systems technology capabilities also include distributed interactive simulation and wargaming; image processing; modeling the design and performance of computer and communications systems; and computer-based training systems.

- For the Instituto Federal Electoral (IFE) in Mexico, a WTB team managed the major systems integration and quality assurance projects needed to capture, verify, and automate census data in Mexico's voter registration system. The team also worked with IFE on the design and engineering of telecommunications and data center software to link the decentralized registration system and on training of local managers to operate it.

Telecommunications and C3 Services—Booz·Allen helps to design and engineer voice, data, and video communications systems. For U.S. government clients, the firm supports telecommunications systems established to protect our national security as well as save lives in times of national disasters. For clients from Eastern Europe and developing nations, the firm helps in privatizing their state-owned telephone systems.

WTB teams offer services in the areas of communications design and architecture, technology standards, systems engineering, program development, local- and wide-area networks, communications security, satellite communications, and modeling and simulation.

- The National Communications System (NCS) awarded Booz·Allen a $46 million, five-year contract to provide systems engineering and technical assistance (SETA) support. The firm is assisting the NCS in developing national security and emergency preparedness telecommunications capabilities, including technology applications and support for the National Information Infrastructure and disaster response. The WTB team is also helping the NCS with the development of communication architectures, network modeling, simulation, and emergency management training initiatives.

Transportation and Space—WTB teams provide technological skills to help clients address issues involving the safety, efficiency, and cost of transportation and its impact on the environment. The firm provides transportation planning, rail systems engineering, transit economics analysis, maritime operations and planning, aviation analysis, air traffic control planning, vessel tracking systems, advanced control systems design and engineering, space technology, space systems development, space systems integration, and integrated logistics support.

The firm works directly with ports, shipping companies, and airlines worldwide on a range of engineering, economic, and management studies and projects, including restructuring.

- Booz·Allen has designed and developed intelligent transportation systems (ITS), helped to plan and install nonpolluting electric-powered bus and commuter rail systems in congested metropolitan areas, and supported modernization of, and replacement of outdated systems.

- The firm has provided more than 30 years of scientific and technical support to NASA and provides similar support to other

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international space agencies and civilian, commercial, and defense space programs in the areas of manned and unmanned spaceflight operations and satellite communications.

Defense and Intelligence—In the international defense arena, the WTB provides services in policy analysis, technology transfer, gaming and simulation, intelligence systems, ship systems, weapon systems, operations security, and exercise planning.

- In 1984, for the U.S. Department of Defense, the WTB helped establish, and has since operated, the Survivability/Vulnerability Information Analysis Center (SURVIAC). As part of its SURVIAC tasks, Booz·Allen works with clients to conduct live fire testing of aircraft and ground vehicles, design electronic countermeasures to protect tanks, and conduct research and development of unmanned aerial vehicles.

Environment and Energy—Booz·Allen provides environmental management and technology services, primarily for government agencies, but also for ministries in developing countries and commercial clients. The company uses technical and management solutions for different environmental risks, providing services such as policy analysis; program management; regulatory impact analysis; business opportunity analysis; environmental, health, and safety audits; corporate environmental management programs; and technical and management support.

- For a major European cosmetics manufacturer, a WTB team analyzed the potential impact to the manufacturer's product lines from future regulatory and market trends. The team also audited programs and facilities for technical compliance with current regulations. Based on the findings, the WTB team worked with the client to develop an environmental management plan that included the creation of a corporate environmental vision, organizational structure, information management system, and risk management approach.

International Projects—The WTB provides advanced technology and management expertise to assist international governments improve infrastructures, strengthen economies, strengthen national security, and privatize state-owned services. Services are offered in the areas of privatization, restructuring, program management, telecommunications, environment, information systems, transportation, public utilities, and foreign military sales.

- In 1995, for the U.S. Army Security Assistance Command at Aberdeen Proving Grounds, Booz·Allen was awarded a five-year, $26 million contract to assist in the development and implementation of a material management center (MMC)/ inventory stock control system for the Egyptian Armament Authority. Under the terms of the agreement, the WTB team is to design, develop, test, install, and maintain the MMC system, which will be installed throughout Egypt.

Management Sciences—Booz·Allen helps businesses improve their performance by applying the latest high-tech management tools and techniques. Services provided include change management, business process reengineering, facilities management, electronic meeting facilitation, financial management support, human resources management, organizational assessment, systems operations management, personnel systems, total quality management, and training systems.

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- For the Assistant Secretary of Defense at the Department of Defense, a WTB team conducted analyses and determined the advantages and disadvantages of DoD-wide consolidation of data centers, software management, and other elements of the IT budget.

Clients

Booz-Allen's WCB clients are primarily major international corporations.

WTB generally serves government clients, in the U.S. and internationally.

Competition

Booz-Allen faces competition from AmeriData Technologies, Andersen Consulting, Arthur D. Little, Bain & Company, BDM Inc., The Boston Consulting Group, CAP GEMINI S.A., Computer Sciences Corporation, Control Data Systems, Coopers & Lybrand, Digital Equipment, Deloitte & Touche, Trecom-DMR Group, EDS, Ernst & Young, Gemini Consulting, Hewitt Associates, IBM, KPMG Peat Marwick, McKinsey & Company, Perot Systems, Price Waterhouse, SAIC, and MCI Systemhouse.

Assessment

Booz-Allen feels its key strengths include:

- Strong commitment to client service and value
- Integrated service offering—incorporating strategy, operations, and technology expertise—with strong industry knowledge
- Strong complementary businesses in both the private and public sectors
- Stable, private ownership and state-of-the-art technology and business capabilities
- Extensive investment in a firmwide knowledge program to capture, create, and disseminate best concepts, lessons learned, and methodologies worldwide

Challenges in the coming year include:

- Continuing growth in all sectors and geographies
- Continuing to contribute to thought leadership in the international business community
- Continuing to attract, retain, and promote effective management and superior technology disciplines

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COMPANY
PROFILE

BORLAND INTERNATIONAL, INC.

1800 Green Hills Road
P.O. Box 660001
Scotts Valley, CA 95066-0001
Phone: (408) 438-8400

President/CEO:	Philippe R. Kahn
Status:	Public Corporation
Stock Exchange:	NASDAQ
Total Employees:	2,093 (3/92)
Total Revenue:	$482,510,000
Fiscal Year End:	3/31/92

Key Points

- In September 1991, the stockholders of Borland and Ashton-Tate approved the merger of the two companies. Borland and Ashton-Tate had competed for years in the PC data base market--Paradox versus dBASE.
  - The merger allows Borland to address customer requirements for Paradox and dBASE to work together.
  - The only pieces of Ashton-Tate technology Borland kept were dBASE and InterBase. Borland will continue to support other products; however, there are no plans for further research and development investments in those areas.
- Borland plans to integrate--using an object-oriented umbrella architecture--all of the company's present and future Windows products (ObjectVision, dBASE for Windows, Paradox for Windows, and Quattro Pro spreadsheet for Windows).
- Borland's proposed Integrated Database Application Programming Interface (IDAPI), a variation of its former ODAPI standard to connect Borland data bases, was announced with support from IBM, Novell, WordPerfect, as well as other vendors.
- Borland has teamed with WordPerfect in a cross-marketing agreement giving their respective users a price break on the other company's key products.
- In December 1992, Borland founder, Philippe Kahn, announced a 15% reduction in the company's workforce as the first step in making Borland more competitive in an increasingly price-vicious software market.

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Company Description

Borland, founded in May 1983, markets and supports data base products, spreadsheets, and programming languages for microcomputers.

Borland's common stock is traded over the counter in the U.S. on the NASDAQ National Market System and on the Unlisted Securities Market in the U.K.

Financials

In the five-year summary that follows, financials have been restated to reflect the pooling-of-interests acquisition of Ashton-Tate:

BORLAND INTERNATIONAL, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ millions, except per share data)

	FISCAL YEAR				
ITEM	3/92	3/91	3/90	3/89	3/88
Revenue	$482.5	$457.3	$378.6	$397.8	$348.9
· Percent change from previous year	6%	21%	(5%)	14%	N/A
Income (loss) before taxes	$(124.6) (a)	$17.9	$(16.7)	$66.3	$80.6
· Percent change from previous year	(796%)	207%	(125%)	(18%)	N/A
Net income (loss)	$(110.4)	$4.8	$(16.6)	$41.3	$44.6
· Percent change from previous year	*	129%	(140%)	(7%)	N/A
Earnings (loss) per share	$(4.29)	$0.20	$(0.73)	$1.95	$2.07
· Percent change from previous year	*	127%	(137%)	(6%)	N/A

* *Percent change exceeds 1,000%*

(a) *Includes restructuring and pooling costs of $146 million associated with the merger with Ashton-Tate.*

Revenue increases during fiscal 1992 were attributed principally to the introduction of dBASE IV 1.5 and Quattro Pro 4.0.

- Following the announcement of the merger with Ashton-Tate in July 1991, revenues from sales of dBASE, Framework, Multimate, and other Ashton-Tate products decreased significantly from levels of the preceding quarters due in part to uncertainty regarding Borland's plans for the future of these products.

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- Borland has announced it will continue to support and enhance the dBASE product family and will continue to ship and support Framework MultiMate and other Ashton-Tate products. Sales of dBASE have subsequently increased; however, sales of Framework, Multimate, and other Ashton-Tate products continue to decrease significantly.

Research and development expenses were approximately $59.6 million (12% of revenue) in fiscal 1992, $65.8 million (14% of revenue) in fiscal 1991, and $59.1 million (16% of revenue) in fiscal 1990.

Revenues for the six months ending September 30, 1992 reached $242.6 million, a 3% decrease from $251.1 million for the same period in 1991. Net income was $7.1 million, compared to net losses of $91.1 million for the same period a year ago.

- Net losses for the prior period include restructuring charges of $110.0 million associated with the acquisition of Ashton-Tate.

- Revenue declines reflected Borland's first quarter historical pattern of revenue life cycles for its various products.

Acquisitions

In September 1991, Borland acquired Ashton-Tate for 9.6 million shares of Borland common stock in a pooling-of-interests transaction.

- Ashton-Tate, formed in 1980, provides PC software for data base management, word processing, business graphics, decision support, and spreadsheet applications.

- Ashton-Tate, with 1,600 employees, had revenue of $230.5 million and net losses of $22 million for the fiscal year ending March 31, 1991.

- The operations of Ashton-Tate have been merged into Borland.

- In connection with the merger, Borland recorded a charge for restructuring and pooling costs of $146 million to reflect the combination of operations of the two companies.

In December 1992, Borland acquired technology and the development team from WordTech Systems of Orinda (CA). Terms of the agreement were not disclosed.

- Borland has acquired all rights to WordTech's Arago line of data base management software, including code for all existing versions

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of its dBXL data base management system and Quicksilver compiler, as well as technology under development, such as multimedia extensions.

- WordTech's development staff will join Borland's data base development team, effective immediately.

- WordTech, with annual revenues of about $5 million, has a strong presence in developer segment of the data base market, with over 200,000 registered users of its Quicksilver and dBXL products. WordTech will continue providing support for those products until January 2, 1992.

- While Borland does not plan to continue shipping the WordTech products, users will be offered discounts for upgrades to Borland products as they are available.

Alliances

In October 1992, Borland and WordPerfect announced a cross-marketing agreement whereby their respective users are given a price break on the other company's key products (WordPerfect and Quattro Pro). The two companies have technology teams working to tighten the integration between their products.

Employees

As of March 31, 1992, Borland had 2,093 employees (1,331 U.S. and 762 international), segmented as follows:

Sales, marketing, and customer support	1,166
Research and development	458
Manufacturing and distribution	184
Finance and administration	285
	2,093

In December 1992, Borland laid off about 15% of its workforce (350 employees) due to ongoing software "price wars" with its competitors.

Competitors

Borland's major competitors are Lotus Development, Microsoft, and Computer Associates.

Key Products and Services

One hundred percent of Borland's revenue is derived from its software products.

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Borland has three principal product families that run primarily on IBM and compatible microcomputers under MS/DOS and/or the MS-Windows operating environment. The company also markets versions of certain of its products for the DEC VAX VMS operating system and various UNIX-based operating systems, including SunOS and SCO Xenix.

Borland plans to integrate--using an object-oriented umbrella architecture called Borland Object Component Architecture (BOCA)--all of the company's present and future Windows products (ObjectVision, dBASE for Windows, Paradox for Windows, and Quattro Pro spreadsheet for Windows). Borland's philosophy is also to ensure that all its client-oriented BOCA products are able to work with the major SQL data base servers via SQL Link.

Borland's primary products include the following:

Data Base Products:

Paradox is a relational data base management system that is known for its ease of use and is designed for both single users on standalone microcomputers and multiple users on microcomputers connected by local-area networks.

- The most recent version, Paradox 3.5, was released in September 1990 and operates under MS-DOS.

- Borland has announced that it is developing a version of Paradox for use with MS-Windows. Availability is scheduled for fiscal 1993.

Paradox SQL Link, released in September 1990, is a companion product to Paradox that allows users to access remote data stored in SQL format that is already familiar to Paradox users.

- The product currently supports recent versions of Microsoft SQL Server, Oracle Server, IBM Extended Edition Database Server, DEC's Rdb/VMS, and the Sybase data base server.

Paradox Engine allows applications to store data in relational data base format in a networked environment.

Ashton-Tate's dBASE IV and its predecessor (dBASE III PLUS) are relational data base management systems for the MS-DOS operating system.

- The most recent version, dBASE IV 1.5, was released in March 1992.

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- Borland has announced that it is developing a version of dBASE for MS-Windows. Availability is scheduled for fiscal 1993.

InterBase is Ashton-Tate's high-performance relational data base management system that operates on minicomputers and workstations manufactured by IBM, DEC, HP, Sun, HP/Apollo, Data General, and Silicon Graphics.

Spreadsheets:

Quattro Pro, released in November 1989, is Borland's advanced electronic spreadsheet for MS/DOS environments. The most recent version, Quattro Pro 4.0, was released in February 1992. A version of Quattro Pro for MS-Windows was released in September 1992.

Language Products:

Borland has sold more than two million copies of its compilers and tools for developers.

Borland C++ and TURBO C++ are language development environments and compilers for C and C++ that run under MS-DOS.

- Borland C++, released in February 1991, enables programmers to write applications that run under Windows. The product also comes packaged with Turbo Assembler, Turbo Debugger, and Turbo Profiler (a code performance analyzer).

Turbo Pascal products are language development environments and compilers for Pascal.

ObjectVision, released in February 1991, runs under Windows and allows users to create business applications by recreating commonly used business forms on screen and linking the forms to each other and to data files maintained in a variety of standard formats, including Paradox, dBASE, Btrieve, and ASCII formats. Borland is developing a version of ObjectVision for OS/2, with availability scheduled for fiscal 1993.

Other Products:

SideKick is a family of multifunctional utility and desktop organizing programs for taking notes, making quick calculations, scheduling appointments, finding phone numbers and addresses, and dialing calls automatically.

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Borland also continues to market and support the following products:

- Reflex, a flat-file data base program
- RapidFile, a flat-file data base program
- MultiMate, a word processing program for IBM PCs and compatibles (Ashton-Tate)
- FullWrite, a word processing program for the Macintosh
- Full Impact, a spreadsheet for the Macintosh
- Applause II, a business graphics product for IBM and compatible PCs
- Framework IV, a multifunction productivity product for IBM and compatible PCs
- SuperKey, a keyboard macro and utility program

Support Services:

Borland customers may access, at no charge, Borland's trained technical support personnel through a special telephone support line. Support is also available through national electronic bulletin board services.

Industry Markets

Borland's products are used by a broad customer base including businesses, educational institutions, government organizations, and end users.

The company distributes its products domestically and internationally, primarily through distributors, dealers, and OEMs. Borland also sells directly to corporate, government, and education customers, as well as end users.

As part of an initiative to increase its presence in corporate accounts, Borland has introduced a series of support programs, including support contracts with options for a CD ROM-based technical data base, a priority hotline that provides fast access to senior technical support engineers, discounted training materials, and a priority bulletin board service on CompuServe.

Geographic Markets

Approximately 51% of Borland's fiscal 1992 revenue was derived from the U.S. and 49% from international sources. A three-year summary of source of revenue follows:

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BORLAND INTERNATIONAL, INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
($ millions)

	FISCAL YEAR					
	3/92		3/91		3/90	
ITEM	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL	REVENUE $	PERCENT OF TOTAL
U.S. operations						
- Customers in U.S.	$246.4	51%	$227.6	50%	$189.9	50%
- Customers in Asia	5.8	1%	7.3	2%	5.2	1%
- Customer in Europe	3.2	1%	2.0	--	6.2	2%
- Other	16.0	3%	28.9	6%	29.3	8%
	$271.4	56%	$265.8	58%	$230.6	61%
European operations	$160.0	33%	$168.1	37%	$127.0	33%
Other international	$51.1	11%	$23.4	5%	$21.0	6%
TOTAL	**$482.5**	**100%**	**$457.3**	**100%**	**$378.6**	**100%**

Borland has international subsidiaries in Australia, Belgium, Canada, Denmark, France, Germany, Hong Kong, Italy, Japan, Malaysia, the Netherlands, New Zealand, Singapore, Spain, Sweden, and the U.K.

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Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

May 1996

The Boston Consulting Group, Inc.

President & CEO: John Clarkeson
Exchange Place
Boston, MA 02109
Phone: (617) 973-1200
Fax: (617) 973-1399

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Status:	Private
Consultants:	1,320*
Revenue:	$550,000,000
Fiscal Year End:	12/31/95

**1995 Average headcount*

Key Points

- The Boston Consulting Group (BCG) is an international general management consulting company, a pioneer in strategy consulting.
- In the 1994-1996 timeframe, BCG opened new offices in Dallas, Seoul, Moscow, Hamburg, Bangkok, Buenos Aires, Helsinki, London, Lisbon, Singapore, Jakarta, and Atlanta.
- During 1995, BCG's revenue grew by 28%.

Company Description

Founded in 1963, BCG has a special focus on analysis and strategy formulation.

BCG was founded by Bruce Henderson, a former Arthur D. Little consultant, as the world's first specialist strategy consulting firm.

The firm has developed various analytical tools and business concepts for understanding and enhancing competitive position. Well-known BCG tools/concepts include product portfolio management or the *Growth Share Matrix*, sustainable growth, experience curves, the value of marketshare and average costing, *Time-Based Competition*, and *Segment-of-One® Marketing*.

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Organization and Structure

BCG is a corporation with approximately 150 to 200 officers. The firm has ten worldwide practice areas and consultants work within a typical function/industry matrix.

The ten groups focus on strategic issues and include:

- Consumer and retail
- Corporate development
- Energy and utilities
- Financial services
- Health care
- High technology
- Industrial goods
- Information technology
- Organization
- Operational effectiveness

Each practice area is headed by an officer of the firm and is supported by officers and specialists from different regional offices.

BCG has 36 offices in major cities around the world. Offices are located in Amsterdam, Atlanta, Auckland, Bangkok, Boston, Brussels, Buenos Aires, Chicago, Dallas, Dusseldorf, Frankfurt, Hamburg, Helsinki, Hong Kong, Jakarta, Kuala Lumpur, Lisbon, London, Los Angeles, Madrid, Melbourne, Milan, Monterey, Moscow, Munich, New York, Paris, San Francisco, Seoul, Shanghai, Singapore, Stockholm, Sydney, Tokyo, Toronto, and Zurich.

Company Strategy

BCG concentrates on understanding business competition and on helping companies succeed in highly competitive markets. The firm is growing rapidly in the overseas marketplace. Over the past 3 years, BCG opened 12 new offices in major cities worldwide.

With its focus on analysis and strategy formulation, BCG mostly recruits consultants that have MBAs or other advanced qualifications in addition to managerial experience. Skills are developed on the job through a formal training program via a network within the organization.

BCG has invested resources and placed special emphasis on professional recruitment, training and ongoing staff development activities. The firm believes in maintaining a common culture, practice and set of uniform standards across the worldwide organization, and therefore supports the idea of continuous international exchange and working relationships that promote global teamwork.

Financials

BCG's 1995 worldwide revenues were $550 million, a 28% increase over 1994 revenue of approximately $430 million.

A three-year revenue summary appears on the following page.

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The Boston Consulting Group
Three-Year Revenue Summary
($ Millions)

	Fiscal Year		
Item	1995	1994	1993
Revenue	$550	$430	$340
• Percent change from previous year	28%	26%	21%

Market Financials

BCG provides consulting to all the major vertical and global markets, from electronics, banking, consumer goods and forest products to manufacturing, pharmaceuticals, and transportation.

Geographic Markets

With the opening of the Buenos Aires office this past year, BCG now reports North America revenue in combination with South America. In 1995, this combined revenue was $197 million.

A three-year source of revenue summary by geographic market follows:

The Boston Consulting Group
Three-Year Geographic Source of Revenue Summary
($ Millions)

	Fiscal Year					
Item	1995		1994		1993	
Geographic Market	Revenue $	Percent of Total	Revenue $	Percent of Total	Revenue $	Percent of Total
North and South America	$197	36%	$166 (a)	39%	$131 (a)	39%
Other international	353	64%	264	61%	209	61%
Total	$550	100%	$430	100%	$340	100%

(a) Includes revenue only from North America during 1994 and 1993.

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Employees

The firm employed about 1,320 consultants on average in 1995.

Key Products and Services

BCG offers strategic analysis and consulting services in the following categories:

- Business strategy
- Marketing and sales strategy
- Strategy audit
- Industrial policy
- Organization
- Time-based competition
- New-product development
- Portfolio strategy
- International development
- Optimizing equity value
- Diversification
- Financial policy
- Product positioning
- Information technology

Consulting services might involve work that includes:

- Developing responses to changes in the competitive environment
- Identifying and pursuing opportunities for new and repositioned brands
- Accelerating responsiveness to customers in sales, manufacturing, delivery, and new-product development
- Creating opportunities for strategic alliances, joint ventures, acquisitions, and divestitures
- Trading off resources within business portfolios
- Helping organizations adapt to a new strategy
- Transforming entrepreneurial ventures into sustainable businesses

Clients

BCG's clients include several of the world's industry leaders as well as a number of medium-sized public and private companies, government agencies, and nonprofit organizations. A majority of the firm's clients are among the 500 largest companies in North and South America, Europe, Asia, and Australia.

A partial listing of clients includes AMR, AST Research Inc., Barclays Global Services, Canadian Airlines, Karolinska Hospital, GTE, Glaxo Wellcome, Grupo Anaya, Miller Brewing Co., Monsanto, and NYNEX.

Marketing and Sales

BCG conducts various marketing and promotional activities such as hosting conferences for senior executives, and puts outpublications such as *Perspectives* that focus on current and emerging issues of interest to senior management.

Competition

BCG faces significant competition from major consulting firms including McKinsey, A.T. Kearney, Andersen Consulting, Coopers & Lybrand, Booz Allen & Hamilton, Gemini Consulting, CSC Consulting, Mercer Management Consulting, and Monitor.

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Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

March 1996

Brainstorm Technologies, Inc.

President: Rizwan Virk
64 Sidney Street
Cambridge, MA 02139
Phone: (617) 621-0800
Fax: (617) 621-8519
Internet: Http://www.braintech.com

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Status:	Private
Employees:	40
Revenue:	$3,000,000*
Fiscal Year End:	12/31/95

* INPUT Estimate

Company Description

Brainstorm Technologies, Inc. provides software solutions for integrating groupware technologies such as Lotus Notes into the electronic commercial enterprise.

- The company provides a suite of integration tools, utilities and services to help organizations manage the design, development, deployment and maintenance of groupware applications with Lotus Notes.
- Brainstorm's suite of Notes integration products include VB/Link, DataLink, OfficeLink and ServerAdmin Plus. The company has also introduced Groupscape, a visual object-oriented development tool.
- Brainstorm also provides consulting servies to assist its clients in all phases of Notes deployment.
- Brainstorm's products are currently used by more than 1,500 organizations in 12 countries and are reportedly used by more than 20% of the organizations that use Lotus Notes.

Brainstorm was founded in 1993 and operates as a private company. Cambridge Technology Group is one of several investors.

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Organization and Structure

Brainstorm Technologies is headquartered in Cambridge (MA).

Key Brainstorm executives are listed below.

Brainstorm Key Executives

Name	Title
Rizwan Virk	President
Mitchell C. Liu	VP Marketing & CTO
George Allen	Director, Consulting Services
Amy Kessler	VP Worldwide Sales

Financials

INPUT estimates Brainstorm's 1995 revenue reached $3 million.

Market Financials

The target market for Brainstorm's products and services is organizations using Lotus Notes.

Geographic Markets

Brainstorm derives revenue from the U.S. and international sources.

Acquisitions

In October 1995, Brainstorm acquired a systems administration tool product from Mauby Technologies. A new, updated version of the product was released as Brainstorm's ServerAdmin Plus v1.5 for Lotus Notes in late 1995.

Employees

Brainstorm currently has approximately 40 employees.

Key Products and Services

By linking Lotus Notes with a client's existing technology, such as application development tools, databases and desktop applications, Brainstorm products help companies speed the deployment cycle of Lotus Notes and increase the return on their investment.

Brainstorm's products fall into four general areas of Lotus Notes integration at the enterprise level—Notes-4GL development tools, Notes-RDBMS integration tools, Notes-desktop integration and Notes-systems administration tools.

VB/Link for Lotus Notes is a point-and-click solution to link Microsoft Visual Basic applications and Lotus Notes data.

- VB/Link allows organizations to create and deploy Windows applications that can read, update and display information stored in Lotus Notes databases.
- Besides Visual Basic, VB/Link supports a range of other graphical development environments, including Microsoft Visual C++, Powersoft PowerBuilder 3.0, Borland C++ 4.0, and Gupta SQL Windows 4.1.
- Among other functions, VB/Link allows companies to create Windows front ends to Lotus Notes databases; perform complex Notes-related tasks outside the Lotus Notes environment; create Notes mail-enabled Visual Basis applications; and implement software "agents" to monitor Lotus Notes databases.
- VB/Link technology has been licensed by Gupta, Borland, Mathsoft and others.
- More than 1,000 organizations worldwide have developed mission-critical applications using VB/Link.

DataLink for Lotus Notes is a point-and-click, scalable, client-based solution for migrating

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data between Lotus Notes and corporate databases.

- It enables organizations to perform both ad hoc and scheduled data transfers between Lotus Notes and all databases that comply with the open database connectivity (ODBC) application integration standard, including Oracle, Sybase, Informix and SQLServer.

- The latest release over DataLink, version 2.0, incorporates Notes-to-Notes data migration and synchronization and server support for OS/2 and Windows NT.

- DataLink is currently being used by more than 400 organizations worldwide.

OfficeLink for Lotus Notes links Lotus Notes and Microsoft Office applications.

- Windows desktop users can transparently capture and share all Word and Excel documents via Lotus Notes without ever leaving the Office application.

- OfficeLink for Lotus Notes allows users to leverage the power of Notes for Word/Excel document storage, management, version control and team computing.

- Brainstorm introduced version 2.0 of OfficeLink for Lotus Notes in December 1995. It runs in Windows 3.X, Windows for Workgroups, Windows NT and Windows 95 operating systems. The suggested retail price is $99 per client; server pricing begins at $199, with volume discounts available for site licenses.

ServerAdmin Plus (SA+) for Lotus Notes provides system administrators and users with tools to manage a complex Notes network.

- SA+ bundles ACL, replication, server statistics and database management tools with an enhanced server console screen.

- SA+ runs under Windows 3.X and Windows 95. Pricing begins at $895 per server.

Groupscape v1.0, announced in January 1996, is a visual object-oriented development tool for building and extending business-critical Lotus Notes workgroup applications to the World Wide Web.

- Groupscape enables organizations to standardize on Netscape as the universal front end to Notes and build corporate intranet applications.

- Groupscape also allows all existing corporate Notes applications to be integrated into and accessible via Netscape browers.

- Groupscape Notes Browser is an interactive Netscape/Groupscape application that lets corporate users view, browse, and surf internal Notes networks and provides a sample of types of applications that can be built using Groupware. The product is downloadable for free from Brainstorm's Web site.

- Groupscape Standard Edition enables users to build interactive Web applications interated with local Notes databases via a point-and-click tool using Visual Basic-compatible language. Groupscape Standard is priced at $995 per developer seat with no run-time fees.

- Groupscape Pro Edition extends the capabilities of Groupscape Standard by supporting connectivity with remote Notes servers on Windows NT, NetWare NLM, UNIX and O/2, as well as with enterprise relational databases such as Oracle, Sybase,

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Informix and DB2 via ODBC. It is priced at $3,995 per developer with no run-time fees.

- Groupscape Enterprise Edition allows developers to build servers with secure access to client/server and legacy systems for transaction-based applications and global electronic commerce. Pricing has not yet been finalized.

Support Services

Brainstorm's Premium Technical Support is an annual software support plan that provides the following:

- 30-day free introductory support for installation and set-up
- After 30 days, one year unlimited, multiple incident support for a flat fee
- Priority service
- Free updates and product point releases
- Free all major upgrades
- Support hours are Monday through Friday 9:00 am to 6:00 pm EST, excluding U.S. holidays.
- Premium Technical Support is a flat price per product.

Professional Services

The Brainstorm Consulting Services Group offers a range of consulting services in the area of corporate data integration. The group assists organizations in all phases of Notes deployment, including installation, designing and developing pilot applications and on-site training. Specific services include:

- Development of data access and integration procedures for linking relational or legacy systems and Lotus Notes
- Development of front-end Windows GUI application programs and tools
- Design, development and deployment of relational and Lotus Notes database systems
- Customized low-level Notes and relational database programming

Marketing and Sales

Brainstorm's software products are sold directly from Brainstorm and through Egghead Software Corporate sales and the Brainstorm Buyers Guide.

The company markets consulting services through a direct sales force.

Brainstorm has resellers in the following countries:

- Australia (Novous Pty Limited; Neural Solutions)
- New Zealand (Pritech Corporation Ltd.)
- U.K. (Doran Essen Consultants Ltd.)
- Japan (Soliton Systems K.K.)
- Germany (Tracker Software GmbH)
- France (Apsylog)
- Sweden (LINQ Systems AB)

Alliances

Brainstorm is a Premiere Business Partner for Lotus Notes.

Competition

Brainstorm's competitors vary by product and include Casahl (DataLink), DSSI (ServerAdmin Plus) and Edge Research, Inc. (VBLink).

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COMPANY
PROFILE

BRANDON SYSTEMS CORPORATION
One Harmon Plaza
Secaucus, NJ 07094
Phone: (201) 392-0800
Fax: (201) 392-0405

Chairman, President, & CEO:	Ira B. Brown
Status:	Public Corporation
Stock Exchange:	NASDAQ
Total Employees:	196
Total Revenue:	$45,293,000
Fiscal Year End:	9/27/92

Key Points

- Historically, Brandon Systems maintained separate organizations for marketing its technical and professional computer services to clients. During fiscal 1992, Brandon Systems implemented a new marketing strategy, whereby each branch office offers the full range of the company's services.

- Brandon Systems believe that revenues for its services will continue to increase as a result of this new marketing strategy, its geographical expansion in recent years, and a continued industry trend toward outsourcing and training.

- Insourcing is the name Brandon Systems has given to long-term agreements for the management and support of its clients' information systems. These services, which are provided through the Brandon FSM division, have continued to increase, representing 7% of total revenue in fiscal 1992, compared to 4% of total revenue in fiscal 1991.

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Company Description

Brandon Systems, founded in 1968, provides a range of professional and outsourcing services to large-scale computer users.

Brandon Systems is currently organized into the following units:

- *Technical Computer Services:* The SYSTEMP[R] Division provides operations and technical support services personnel on an as-needed basis to large computer installations. This business contributed approximately 71% to Brandon Systems' fiscal 1992 revenue.

- *Insourcing Services*: The Brandon FSM division offers contracts for the long-term operation of data center functions, communications facilities, and internal office systems. This unit contributed approximately 7% to Brandon Systems' fiscal 1992 revenue.

- *Professional Computer Services:* Brandon Systems Group (formerly Brandon Consulting Group) provides system development and consulting professional services. This unit contributed approximately 21% to Brandon Systems' fiscal 1992 revenue.

- *Training Services*: The Brandon Training Group offers technical training courses at client sites or at Brandon systems' training center in New York City. This unit contributed 1% to Brandon Systems' fiscal 1992 revenue.

Financials

Fiscal 1992 revenue reached $45.3 million, a 19% increase over fiscal 1991 revenue of $37.9 million. Net income rose nearly 33%, from nearly $2 million in fiscal 1991 to over $2.6 million in fiscal 1992. A five-year financial summary follows:

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Professional Computer Services:

Through Brandon Systems Group, the company provides professional computer consulting services to system developers and computer users.

- Services performed include systems analysis, systems design, application development, and programming for most large-scale computers, minicomputers, and microcomputers, with an emphasis on data base and on-line applications.

- Other services include EDP planning and implementation, management audits, computer security planning, training, and the application of efficiency standards.

- The Brandon Systems Group is typically engaged by clients to provide its services for periods ranging from one month to several years under a contract arrangement.

- During fiscal 1991, the group was selected to assist the State of Colorado in its automation efforts.

Training Services:

The Brandon Training Group provides instruction in open systems technologies and in office automation to information systems managers, software engineers, and end users.

- Courses are available at client sites or at Brandon Systems' training center in New York City.

- Historically, training services have been offered to existing and prospective customers and have not generated significant revenues.

Outsourcing Services:

Through Brandon FSM, long-term contracts are provided for the operation of clients' data centers, telecommunications centers, and administrative facilities.

Brandon Systems refers to certain long-term contracts as "insourcing," whereby it commits to perform in functional areas of computer operations and/or computer programming under the general direction of clients' information systems management (the client maintains functional control of activities insourced).

Brandon Systems currently has ten data processing centers under contract.

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FSM insourcing contracts usually are for multiple years and require Brandon Systems to furnish its clients with a stipulated service level at a fixed price. Contracts are usually billed to clients on a monthly basis.

Industry Markets

Brandon Systems' clients consist primarily of industrial firms, investment banking firms, banks, utilities, telecommunications companies, major corporations, and government agencies.

During fiscal 1992, 1991, and 1990, no single customer represented more than 10% of total revenue. Sales to five major operating units of AT&T accounted for $4.5 million and $4.7 million of Brandon Systems' revenue for fiscal 1989 and 1988, respectively.

Geographic Markets

All of Brandon Systems' fiscal 1992 revenue was derived from the U.S. Most of the company's customers are located in major metropolitan areas.

The company currently maintains offices in New York City and Westbury (NY); Edison, Secaucus, and East Rutherford (NJ); Philadelphia (PA); Chicago (IL); Houston and Irving (TX); Independence (OH); Los Angeles, Orange, and Oakland (CA); Milwaukee (WI); Atlanta (GA); Denver (CO); Stamford (CT); Boston (MA); Reston (VA); and Wilmington (DE).

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BRANDON SYSTEMS CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
($ millions, except per share data)

	FISCAL YEAR				
ITEM	9/92	9/91	9/90	9/89	9/88
Revenue	$45.3	$37.9	$35.4	$29.9	$27.7
· Percent increase from previous year	19%	7%	18%	8%	25%
Income before taxes	$4.3	$2.9	$3.4	$2.9	$3.4
· Percent increase (decrease) from previous year	48%	(15%)	18%	(15%)	13%
· Gross margin	9%	8%	10%	10%	12%
Net income	$2.6	$2.0	$2.3	$2.0	$2.1
· Percent increase (decrease) from previous year	33%	(13%)	19%	(5%)	31%
· Net margin	6%	5%	7%	7%	8%
Earnings per share (a)	$0.60	$0.45	$0.54	$0.45	$0.50
· Percent increase (decrease) from previous year	33%	(17%)	225%	(10%)	N/A

(a) Restated to reflect a 5-for-4 stock split on June 18, 1992.

Brandon Systems' management attributes revenue growth to increases in the volume for all services provided by the company and also continued growth from offices opened in recent years.

- Technical computer services revenue increased 17% in fiscal 1992, while professional computer services revenue increased 9% during the year. These increases resulted primarily from increased volume with existing customers.

- Insourcing and training revenues increased 96% during fiscal 1992, primarily as a result of Brandon Systems increasing the number of data centers it insources.

Employees

As of September 27, 1992, Brandon Systems employed 196 salaried persons (other than temporary employees on assignment to clients), generating revenue of $231,087 per employee. These employees are segmented as follows:

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Employee Category	Number	Percent of Total
Sales and employee recruitment	95	48%
Professional computer support	17	9%
Secretarial and clerical	26	13%
Executive and administrative	58	30%
Total Employees	196	100%

During the fiscal year ending September 29, 1992, the company employed approximately 5,500 hourly technicians and 30 salaried technicians on assignments to approximately approximately 900 clients.

Key Products and Services

Approximately 93% of Brandon Systems' fiscal 1992 revenue was derived from professional services (SYSTEMP[R], Brandon Systems Group, and Brandon Training Group) and 7% from outsourcing (Brandon FSM).

Technical Services:

Under its SYSTEMP[R] trademark, the company provides technical support personnel to clients on a temporary or full-time basis. Assignments have involved from one to as many as 90 Brandon Systems technicians and may range from one day to several years. Technical services provided include:

- Computer operations
- Operations analysis
- Communications support, monitoring and testing, and installation
- Operations support, including controlling data input and output, data distribution, and storage and retrieval
- Personal computer services, including installation and maintenance of LAN networks; designing, developing, operating, and maintaining software and data bases; and installing and maintaining PC hardware
- In August 1990, Brandon Systems acquired The Resource Group, Inc., a Boston-area supplier of computer technical services, for approximately $200,000. The acquisition expanded the company's SYSTEMP[R] services to Northern New England.

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Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

October 1995

Broadway & Seymour, Inc.

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Chairman & CEO: William W. Neal III
President & COO: Alan C. Stanford
128 South Tryon Street
Charlotte, NC 28202-5050
Phone: (800) 274-9287
Fax: (704) 344-3542

BROADWAY & SEYMOUR
INFORMATION TECHNOLOGY SOLUTIONS

Status:	Public
Employees:	1,122 (6/95)
1994 Revenue:	$132,858,000
Fiscal Year End:	12/31/94

Key Points

- Broadway & Seymour is an information technology company providing integrated business solutions to the financial services and other selected markets worldwide.
- In August 1995, Broadway & Seymour entered into an alliance with Fidelity Investments to jointly integrate and market their trust processing and investment capabilities for bank trust and investment institutions.
- The acquisition of BancCorp Systems in early 1995 expanded Broadway & Seymour's offerings in the areas of trust accounting software for PCs and midrange computers marketed principally to financial institutions and not-for-profit organizations.
- The acquisition of EBG & Associates, also in early 1995, added retirement plan administration software to Broadway & Seymour's software product offerings.
- Acquisitions made during 1994 added an integrated decision-support platform for

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commercial and private U.S. banks and accounting and management software for legal and accounting firms.

- In mid-1995, Broadway & Seymour sold its LIBERTY community bank products and services to Jack Henry & Associates.

- In December 1994, Medaphis Corporation, a Broadway & Seymour systems integration client, assumed ownership of its contract with Broadway & Seymour, acquired Broadway & Seymour's Gateway document conversion operations and acquired some of Broadway & Seymour's non-bank systems integration contracts.

- During 1994, Broadway & Seymour acquired sole ownership of the AMtrust trust asset management and accounting system.

Company Description

Broadway & Seymour provides a range of systems integration, professional services and software products primarily to the financial services industry.

The company's offerings address the specific information technology needs of different segments or functions of the financial services industry, such as platform and teller automation, customer service automation, trust operations, check processing, imaging, retirement plan documentation and administration and time and services billing.

Organization and Structure

Through 1994, Broadway & Seymour was organized into five strategic business units, described below.

Asset Management Services, contributing 8% to Broadway & Seymour's 1994 revenue, provides AMtrust trust asset management and accounting software and reengineering services to major American banks and U.S.-based units of foreign financial institutions.

New Financial Services, contributing 32% to Broadway & Seymour's 1994 revenue, leverages the company's expertise to nonbanking clients who require applications similar to those for the banking industry. Systems integration/hardware and software solutions are provided for item processing, remittance processing and customer service systems for credit card processors, utilities and insurance companies.

Retail and Commercial Solutions, contributing 15% to Broadway & Seymour's 1994 revenue, provides large banking holding companies with applications solutions for commercial lending (CRISP and Gemini), retail delivery (BANCStar) and mortgage (Millennium Mortgage).

Professional Support Services, contributing 29% to Broadway & Seymour's 1994 revenue, consists of wholly owned subsidiaries Corbel, Elite Information Systems and EBG & Associates. The unit provides recordkeeping software, financial management applications and expert system document preparation services to banks, professionals in the legal, benefits and accounting industries and other financial services firms.

Community Financial Institutions, contributing 16% to Broadway & Seymour's 1994 revenue, provided branch automation systems (BANCStar Spectrum) and core processing (LIBERTY) for community banks and check imaging and item processing applications. As a result of the sale of the LIBERTY line to Jack Henry & Associates, this unit no longer exists. Broadway & Seymour continues to support but no longer actively markets the BANCStar Spectrum line. The company has retained its check

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imaging and item processing operations and customer base.

In addition to its headquarters in Charlotte (NC), Broadway & Seymour has satellite offices in Baltimore (MD), Boston (MA), Chicago (IL), Columbus (OH), Raleigh (NC), San Francisco (CA) and London (England).

Corbel is located in Jacksonville (FL); Elite Information Systems is based in Los Angeles (CA); and BancCorp Systems is located in Amarillo (TX).

Company Strategy

Broadway & Seymour's strategy includes the following elements:

- Creating value for its clients and competitive advantage for itself by combining industry expertise and entrepreneurial creativity
- Continued sales to existing customers
- Growth through continued strength in core operations as well as acquisitions
- Continue an expanding base of application skills, technology skills and project management skills
- Continue a growing library of software assets
- Continue core competencies in object-based programming techniques, graphical user interface programming, client/server computing and image processing technology solutions in a state-of-the-art computing environment

Financials

Broadway & Seymour's calendar 1994 revenue reached $132.9 million, a 69% increase over 1993 revenue of $78.7 million for the twelve months ending December 31, 1993. Net income for 1994 reached $7.2 million, compared to a net loss of $2.9 million for calendar 1993.

- Broadway & Seymour changed its fiscal year end from January 31 to December 31 during 1993. In the five-year summary on the following page, financials for the twelve months ending December 31, 1993 are presented for comparative purposes. The results for fiscal 1993, 1992 and 1991 are not directly comparable with those of calendar 1993 and 1994, but are presented for historical purposes.
- Financials for all periods have been restated to reflect the pooling of interests acquisition of Micro/Resources, Inc. in September 1994.

Revenue growth in 1994 was attributed to the following:

- Services revenue increased 31% to $68.5 million primarily due to the acquisition of Corbel and Elite Information Systems. Revenue from systems integration and LIBERTY community bank related processing/outsourcing services in 1994 remained relatively flat compared with the prior year. Management focused significant attention on strengthening its systems integration consulting staff in 1994. During the year, Broadway & Seymour generated more than $40 million in revenues from workflow reengineering-related projects.
- Product revenue increased 145% in 1994 to $64.4 million due primarily to sales to Medaphis Corporation, the acquisitions of Corbel and Elite, sales of the company's imaging software and increased sales of the AMtrust and branch automation products, offset by a 29% decline in sales of LIBERTY community banking software and related

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products. The increase of Corbel's revenues is a result of including a full year of Corbel's operations and is also due to an increase in retirement plan document preparation volumes, as the extension period for amending plans to conform with the Tax Reform Act of 1986 expired on December 31, 1994. Revenue from AMtrust and branch automation products increased 238% and 16%, respectively.

- A five-year financial summary follows:

Broadway & Seymour, Inc.
Five-Year Financial Summary
($ Millions, except per share data)

Item	Twelve Months Ending				
	December 31, 1994	December 31, 1993	January 31, 1993	January 31, 1992	January 31, 1991
Revenue	$132.9	$78.7	$65.6	$53.9	$49.4
• Percent change from previous year	69%	N/A	22%	9%	N/A
Income (loss) before taxes	$13.1	$(1.3)	$6.6	$2.8	$1.8
• Percent change from previous year	*	(a) N/A	136%	52%	N/A
Net income (loss)	$7.2	$(2.9)	$3.4	$1.5	$1.5
• Percent change from previous year	621%	N/A	127%	--	N/A
Earnings (loss) per share	$0.85	N/A	$0.51	$0.26	$0.30
• Percent change from previous year	N/A	N/A	96%	(13%)	N/A

* *Percent change exceeds 1,000%.*

(a) Includes a $5 million charge related to the write-down of assets acquired in the February 1992 purchase of National Financial Computer Systems and a $500,000 charge related to relocation expenses.

Interim Results

Revenue for the nine months ending September 30, 1995 reached $98.4 million, compared to $84.4 million for the same period in 1994. Net income reached $5.3 million, compared to $4.7 million for the same period a year ago.

Revenue Analysis by Product/Service

Broadway & Seymour's 1994 revenue was derived approximately as follows:

Product/Service	Revenue ($ Millions)	Percent of Total
Services (a)	$68.1	51%
Software products	48.5	37%
Hardware products	13.3	10%
Other	3.0	2%
Total	$132.9	100%

(a) Services include software development, customization, installation, support and maintenance, documentation, training and consulting services.

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Market Financials

Approximately 49% of Broadway & Seymour's 1994 revenue was derived from financial services institutions and 29% from legal and accounting services firms. The remaining 32% of revenue was derived from credit card processors, utilities, communications companies and other sources.

Geographic Markets

Approximately 98% of Broadway & Seymour's 1994 revenue was derived from the U.S. and 2% from international sources.

Acquisitions

Broadway & Seymour has made at least two acquisitions per year for five successive years. Acquisitions made over the past several years are summarized below.

In June 1995, Broadway & Seymour acquired The Minicomputer Company of Maryland, Inc. (TMC) for approximately 28,900 shares of Broadway & Seymour common stock (valued at $500,000), $725,000 in cash and $400,000 in notes payable. TMC provides time and billing software, custom programming services and other computer-related services primarily to law firms. The acquisition was accounted for as a purchase.

In January 1995, Broadway & Seymour acquired BancCorp Systems, Inc. of Amarillo (TX).

- BancCorp is a developer and owner of trust accounting software for PCs and midrange computers marketed principally to financial institutions and not-for-profit organizations.
- BancCorp was acquired for approximately 95,400 shares of Broadway & Seymour common stock (valued at nearly $2 million), seller financing of $825,000 to be paid over the two years following the deal and the assumption of existing BancCorp debt and other obligations. The acquisition was accounted for as a purchase.

In January 1995, Broadway & Seymour acquired EBG & Associates, Inc. of Chicago (IL).

- EBG provides retirement plan administration software.
- EBG was acquired in exchange for approximately 48,000 shares of Broadway & Seymour common stock (valued at $1 million) and the assumption of existing EBG obligations.

In September 1994, Broadway & Seymour acquired Micro/Resources, Inc. (MRI) of Larkspur (CA).

- MRI is the developer and owner of the CRISP product family—an integrated decision support platform for commercial and private banks in the U.S. The company also provides programming, consulting and technical services related to the installation and support of CRISP.
- MRI was acquired for approximately 632,000 shares of Broadway & Seymour common stock. The acquisition was accounted for as a pooling of interests.

In February 1994, Broadway & Seymour acquired Elite Information Systems, Inc. (formerly Elite Data Processing, Inc.) of Los Angeles (CA).

- Elite provides office automation, timekeeping, accounting and information management software to legal and

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accounting firms nationwide and in the U.K.

- Elite was acquired for approximately 192,300 shares of Broadway & Seymour common stock (valued at approximately $1.8 million), $5.8 million in cash and notes payable totaling $3.8 million. The acquisition was accounted for as a purchase.

In January 1994, Broadway & Seymour purchased the AMtrust software product for $2 million from a four-bank ownership consortium, giving its sole ownership of the product. Broadway & Seymour was the marketing agent of AMtrust for the consortium prior to the purchase.

In May 1993, Broadway & Seymour purchased Corbel & Co. of Jacksonville (FL) for approximately 410,700 shares of company stock (valued at approximately $3.2 million) and $7.7 million in cash. Corbel is one of the largest producers of pension plan documents in the U.S. using its proprietary GOLD software product. Corbel is also the developer and owner of Quantech, a retirement plan administration software package marketed to pension professionals nationwide.

Divestitures

In June 1995, Broadway & Seymour sold to Jack Henry & Associates certain assets of its community bank business, including the LIBERTY software products and data processing centers.

- The aggregate transaction price was $11.6 million, of which approximately $6 million was paid at closing for assets and software license fees, and approximately $5.6 million will be paid over the subsequent 12 months for remaining license fees, software maintenance, marketing services and transition support services.

- The LIBERTY system is currently used by approximately 450 community banks for back-office functions, as well as support for on-line teller terminals, check imaging, maintenance of records relating to investments, safe deposit boxes and other consumer and financial information. The system is available as a software product or via service bureau or facilities management options.

In 1994, Broadway & Seymour was engaged by Medaphis Corporation to provide systems integration and reengineering services in a multiyear, multimillion dollar contract. On December 30, 1994, Medaphis assumed ownership of its contract with Broadway & Seymour when Broadway & Seymour and Medaphis entered into a series of agreements.

- As a result, certain of Broadway & Seymour's Gateway document conversion operations were sold to Medaphis and its systems integration business was split, with Broadway & Seymour retaining contracts with banks and bank subsidiaries and Medaphis receiving other significant open contracts.

- Medaphis also obtained a transferable right and license to copy, use, distribute, sublicense and prepare derivative works of object and source copies of Gateway software. Since most of Gateway's employees became employees of Medaphis and/or its subsidiary, transitional provisions in the agreements included the subcontracting by Medaphis of certain work relating to contracts retained by Broadway & Seymour.

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- Other transitional provisions include software maintenance services to be provided by Broadway & Seymour and mutual noncompete and nonsolicitation agreements.

- Medaphis paid Broadway & Seymour $25.3 million plus an additional $6.8 million for maintenance services provided by Broadway & Seymour through June 1995.

Employees

As of June 30, 1995, the company had 1,122 employees.

Key Products and Services

Asset Management Services

The Asset Management Services Group (AMSG) is a leading provider of trust processing technology and professional services to bank trust and investment institutions.

- Fifteen of the fifty largest trust institutions in the U.S. are AMSG clients.

- The business unit includes a subsidiary called BancCorp Systems, Inc., a developer and owner of trust accounting software for micro and midrange computers marketed principally to financial institutions, non-profit organizations, universities, law firms and private family trusts.

- The unit contributed more than $10.5 million to 1994 revenue.

AMtrust provides automated support to substantially all of the functional areas of trust operations, including on-line securities movement and control (tracking orders from the point of origin, through trading and delivery to final settlement), on-line inquiry, posting and maintenance, common fund, municipal bond fund, variable note and money market processing, master trust accounting and reporting, cash management, real estate management and accounting, investment performance measurement, fully-allocated cost accounting, full income and disbursement processing, mortgage-backed securities processing, customer-defined fees systems and system security.

AMpreferred is a service bureau/facilities management offering based on the AMtrust solution. Through an alliance agreement with Fidelity Investments, AMpreferred will be the delivery channel through which bank trust and investment institutions gain access to a single-source integrated business solution. The alliance's products and services include innovative trust technology, asset management programs, 401(k) services, securities clearance, custody, execution, value-added brokerage and choice and 3,500 Fidelity and non-Fidelity mutual funds.

AssetManager is a suite of products designed to run on the desktops of trust professionals. These Windows-based solutions work with commercially available and proprietary legacy systems, as well as AMtrust, to enhance efficiency and responsiveness in the asset management process.

AMSG also provides bank trust and investment institutions with total business performance solutions, including the following:

- Activity-based management and cost control
- Best practices benchmarking
- Management consulting
- Phone center strategies
- Process management training

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- Workflow and business process reengineering

BancCorp Systems, acquired in January 1995, provides trust accounting systems to more than 400 community banks, non-profit organizations and other organizations.

- TrustProcessor, one of the first in-house PC trust accounting systems, provides pooled fund management for non-profits, and multicurrency trust accounting for institutions with foreign investments. It also interfaces into a variety of other services such as cash management, market pricing, employee benefits, custody, performance measurement and tax preparation.

- TrustProcessor International is a multicurrency version of the original accounting system used widely throughout the Caribbean.

New Financial Services

This business unit provides systems integration, hardware and software solutions primarily for non-bank clients—credit card processors, utilities and insurance companies—primarily for item processing, remittance processing and customer service applications. Revenue from these operations was $42.5 million in 1994, which includes revenue associated with the Medaphis divestiture.

- Tools used include imaging, workflow, computer output to laser disk (COLD) and telephony technologies.

- The company employs application development, systems integration services and business processes to deliver custom solutions for each client.

Project examples include the following:

- A multiyear contract with Comdata to provide business process reengineering, workflow and imaging, and systems development services. The new system streamlines customer service while facilitating business operations.

- A new project with NaBANCO to automate its customer service center in Long Island (NY).

- Providing AT&T's Universal Card Services division with a distributed, client/server system with a GUI front-end that consolidates the company's information systems and presents them on a single desktop platform.

- Acting as a subcontractor to AT&T Global Information Solutions to deliver large item processing systems.

For 1995, goals of this unit include:

- Build awareness in non-banking markets

- Market aggressively to targeted industries

- Continue to build strategic partnerships and alliances

Retail and Commercial Solutions

This unit provides solutions for commercial lending, retail delivery and mortgage applications. The unit has 42 of the top 100 bank holding companies as clients and generated $20 million in revenue during 1994.

CRISP and Gemini, acquired with Micro/Resources in September 1994, are desktop decision support tools used to provide relationship management, customer and product profitability, pricing, credit

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origination and proposal preparation functions for commercial lenders.

- A variety of programming, consulting and technical services are also provided related to the installation and support of desktop decision support systems.

- First Interstate Bank has engaged Broadway & Seymour to customize CRISP for it commercial lenders throughout the enterprise.

The original BANCStar product, acquired in 1992, is a text-based branch automation solution for retail delivery banking applications. BANCStar Prism, introduced in 1994, is the company's graphical user interface version of BANCStar.

- BANCStar consists of integrated application code and specific application generators.

  - The integrated application code is a set of business templates that represent the skeleton functionality of information systems required by a branch of a bank. This includes software that supports teller, customer service, sales and loan calculation activities, as well as software that supports basic system functions such as providing branch statistics and storing and forwarding information to a mainframe computer.

  - Application generators are used to modify, enhance or rewrite application code to support the specific, custom needs of larger banks.

- A bank acquiring a BANCStar system must license a copy of BANCStar for each workstation on which the system will operate. Broadway & Seymour also offers enterprise-wide license agreements for the software.

- BANCStar is licensed to more than 500 banks across the U.S. ranging in asset sized from start-up to multibillion dollar banks. BANCStar is now installed in 23 of the top 100 bank holding companies.

Millennium Mortgage is a software product for PCs that fully automates the lending process, from prequalification through servicing.

- Modules include prequalification, origination, secondary marketing, servicing and regulatory and compliance reporting.

- Clients include PNC Mortgage and Ford Motor Credit.

Goals for this unit in 1995 include:

- Offering major enhancements for CRISP, Gemini, BANCStar and Millennium Mortgage

- Expanding product support to meet needs of customers

Professional Support Services

This unit, with 1994 revenue of $38.5 million, provides products and services through its Corbel and Elite subsidiaries.

Corbel provides a range of retirement plan services to nearly 8,000 pension consultants, attorneys, accountants and banks.

- Corbel is one of the largest producers of pension plan documents in the U.S. using its proprietary Generation of Legal Documents (GOLD) system, a software product capable of assembling complex legal documents.

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- AutoDoc is a PC-based expert document generation software product that produces custom and prototype retirement plans and cafeteria plans. Versions are available for self-funded and group health plans.

- Corbel has developed and markets Quantech, a Windows™-based pension recordkeeping software product suitable for the needs of any size firm. Quantech is a GUI-based product that provides all elements of retirement plan administration, from participant tracking to investment tracking.

- Pentabs is a DOS-based product with many similarities to Quantech. There are more than 1,000 clients using the system today.

- Corbel's National Pension Alliance (NPA) provides its members opportunities to offer mutual funds, brings them daily recordkeeping capabilities and allows them to compete in the 401(k) plan administration market. NPA clients include banks, pension administrators and consultants, accounting firms and other professionals.

Elite provides office automation, time keeping, accounting and information management software to the legal and accounting professions.

- The products, which incorporate client/server and open systems architecture within the Windows environment, include the following:

  - Elite Legal Billing System is a time and billing system that includes cost collection, budgeting, profitability and inquiry functions.

  - Elite Accounts Receivable/Collections module is a tool for managing the collections process, from phone contacts to automatic letter writing.

  - Elite Records Management manages both internal and external records with full barcode support in complete integration with other modules.

  - Elite Practice Management manages relationships among members of the firm, clients and prospects.

  - Elite Financial Management includes General Ledger and Accounts Payable, which support cash or accrual accounting, budgeting and multicurrency.

  - Elite Conflict of Interest provides an integrated conflicts checker based on a full-text search engine.

  - Elite Case Management uses firm-defined rules to track calendar and docket entries and manage case data.

- Elite software is marketed through eight sales offices nationwide and in the U.K.

- Elite products are used by more than 300 legal firms.

EBG, acquired in early 1995, markets the following DOS-based products to employee benefits professionals:

- BenCaster is a defined benefit plan recordkeeping system that allows plan sponsors to calculate accurate pension payout figures, vesting, annual accrued benefits, lump sum amounts and monthly benefits.

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- StartNow! is a "hands-on" retirement benefits estimating tool for employees to estimate individual benefits based on interactive input.

- TrAcc, a pension plan asset recordkeeping and reporting system, offers portfolio accounting general ledger functions, memorized transactions and features such as counter-balancing accounts and global securities pricing.

- PensionMaker Age-Weighted Plus is an allocation system enabling administrators to highlight the benefits of hybrid plans—Age-Weighted, New Comparability and Super Integrated Profit Sharing plans—over traditional integrated and non-integrated profit sharing plans.

VisualImpact Products and Services

VisualImpact is a suite of integrated item and image processing software. The product suite provides advanced function applications that can be used in traditional as well as image-enabled item processing environments. Implementation options allow modular investment, including VisualCapture, VisualPOD, VisualStatement, VisualArchive, VisualAdmin and VisualEncode. The product is marketed to community and mid-tier banks.

Change Management Services

The Change Management Services unit offers industry and technical education, project management, and consulting services to large national and international companies to meet their education and technology implementation needs.

- Consulting services include change management consulting, transition support, education consulting and project management.

- Education services include industry education, multimedia-based technical education and user training.

- The division is an authorized technical education center for Novell, Microsoft and Digitalk and operates three education centers in Charlotte and Raleigh-Durham (NC) and Jacksonville (FL).

Clients

Broadway & Seymour has 105 relationships with 65 clients among the top 100 U.S. bank holding companies and 144 relationships with 101 clients among the top 200.

Systems integration clients include First Union National Bank, First Interstate and Chase Manhattan.

AMtrust clients include Bank of America, Chemical Bank, NationsBank, PNC Bank, KeyCorp and Bank of Boston.

CRISP and Gemini clients include NationsBank, Banc One, First Union, PNC, KeyCorp, Norwest and SunTrust Banks.

BANCStar Prism clients include Union Bank, First American National Bank, Long Island Savings Bank, Premier Bank, PNC and Dollar Bank.

Marketing and Sales

Broadway & Seymour has a direct field sales staff that targets different market areas, including systems integration project customers, new community bank customers, trust institutions and trust departments of large banks, insurance companies, credit card processors, retirement plan administrators and legal and accounting organizations.

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The majority of sales personnel are based at the company's headquarters and are given geographic sales responsibility within their targeted customer markets.

Broadway & Seymour employs approximately 100 sales and marketing personnel. Additionally, senior project managers are directly involved in obtaining large systems integration projects, frequently working in a team with one or more sales professionals.

New customer contacts are generated by a variety of methods, including customer referrals, personal sales calls, attendance at trade shows and seminars, advertising in trade publications, direct mailings to targeted customers and telemarketing.

Alliances

Broadway & Seymour has alliances/marketing agreements with various vendors as follows:

- Authorized education center for Microsoft, Novell and Digitalk
- Development partners with Digitalk, Hewlett-Packard, IBM, Microsoft and Novell
- Original Equipment Manufacturer for FTP Software, Gupta and Xerox
- Marketing alliances with Digital and Sun Microsystems
- Remarketer for AT&T GIS, Eastman Kodak, FileNet, Oracle and Viewstar
- Value-added reseller for Access Graphics, Intervoice, Nabnasset, Oracle, Sun, Sybase and Vantage Technologies
- Microsoft Banking Vendor Council Member
- Associate Member of the Financial Services Technology Consortium

Competitors

Broadway & Seymour competitors include the following:

- Retail and Commercial Solutions competitors include Andersen Consulting, Argo Data Resources, EDS/Ampersand, IBM and Baker Hill.
- Corbel competitors include Trustmark, SunGard, Datair and FDP.
- Elite competitors include Barrister, CompuTrac, CMS Data and Wehrheim Systems.
- Asset Management Services competitors include SEI, Financial Technologies Inc. (FTI), National Computer Systems (NCS), SunGard and M&I Data Services.
- New Financial Services competitors include the Big 6 consulting firms, EDS and various regional systems integrators.
- Change Management Services competitors include Andersen Consulting and other regional technical education companies.

Assessment

Broadway & Seymour considers the company's strengths to include:

- Leadership positions of applications software products in their respective markets (trust processing, commercial lending relationship management, branch automation, retirement plan administration, legal automation)

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- Industry expertise in respective target markets (asset management, retail delivery, call centers, item processing, retirement plan/pension consulting, legal automation)

- Systems/technical expertise in a range of technologies (client/server, imaging, GUI, systems integration, various operating systems and hardware platforms)

- Strategic alliances with major technology industry players

- Client relationships with top tier banking institutions

Challenges include:

- The effects of changes in the competitive structure of the financial services industry on the company's markets. First, consolidation in the banking industry erodes customer and prospect bases. Second, lines of demarcation between banks, insurance companies and investment firms are blurring. Third, smaller banks and services companies must offer more to compete against larger financial institutions.

- The consolidation of technology vendors creates more powerful competitors. Also, the trend toward vendor specialization on single product or processing services with large scale economies

- Ability to leverage strengths (products, industry, technology, strategic alliances, client base) to new and existing markets

- Integrating recent acquisitions while continuing to grow revenues and operating margins

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INPUT

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

August 1996

Broderbund Software, Inc.

Chairman & CEO: Doug Carlston
President & COO: Bill McDonagh
500 Redwood Boulevard
P.O. Box 6121
Novato, CA 94948-6121
Phone: (415) 382-4400
Fax: (415) 382-4582
Internet: http://www.broderbund.com

Status:	Public
Employees:	625 (7/96)
Revenue, 9 mo. ending 5/31/96:	$153,998,000
Revenue, FYE 8/31/95:	$171,594,000

Key Points

- Broderbund develops, publishes, and markets a range of consumer software for use in homes, schools, and small businesses.
- The company's five best selling products during fiscal 1995 were *The Print Shop® Deluxe CD Ensemble™, Myst®, Where in the World is Carmen Sandiego?®, 3D Home Architect®, and Math Workshop™.*
- During fiscal 1995, Broderbund completed the conversion of its product line to CD ROM. In fiscal 1995, approximately 80% of Broderbund's revenue came from CD ROM sales.
- In late 1995, Broderbund lost its bid to acquire The Learning Company, a leading developer of educational software. In December 1995, SoftKey International acquired 95% of The Learning Company for approximately $684 million.
- In early 1996, Broderbund formed the Fremont Education Division, an educational software development division based in Fremont (CA). The division's team of

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software developers includes former employees of The Learning Company.

- In April 1995, Broderbund acquired Banner Blue Software, a leading developer of genealogy software.

- During fiscal 1995, Broderbund opened an office in London to service as a hub for its sales and marketing efforts in Europe.

Company Description

Broderbund develops, publishes, and markets a diversified line of consumer software for the home, school, and small business markets.

Broderbund sells *published products* (developed by Broderbund using a combination of internal and external resources) and *affiliated label products* (developed by other software companies and distributed by Broderbund through its sales organization). The company offers products primarily in three consumer software categories:

- Home productivity products, consisting of software that enables the consumer to produce and manipulate printed output, enhancing the user's creativity

- Education products, designed to be both educational and fun

- Entertainment products, designed for the consumer's leisure time enjoyment

Broderbund has sold more than 30 million units of software since its founding in 1980.

Organization and Structure

During fiscal 1995, Broderbund organized its production studios into three studio units, each dedicated to products targeted at the education, entertainment, or productivity markets.

Broderbund Studios is Broderbund's product development arm. The Fremont Education Division reports to Broderbund Studios.

Living Books® is an equal partnership between Broderbund and Random House, formed in 1994. This joint venture publishes a series of interactive animated children's storybooks on CD ROM.

Broderbund's key executives are summarized below:

Broderbund Key Executives

Name	Title
Doug Carlston	Chairman & CEO
Bill McDonagh	President & COO
Jan L. Gullett	SVP Marketing and Sales
Harry Wilker	SVP Broderbund Studios
John W. Baker	VP Product Development
Steven M. Dunphy	VP Business Development
Rodney D. Haden	VP Sales
Pat Walkington	VP Educational Sales and Marketing
Kenneth L. Hess	President, Banner Blue Div.

U.S. sales offices are in Los Angeles and Novato (CA), Atlanta (GA), Chicago (IL), Boston (MA), Philadelphia (PA), Dallas (TX), and Cleveland (OH).

Broderbund has a subsidiary in England to market and distribute localized versions of its products to major European markets.

Company Strategy

Broderbund's product strategy is to identify and develop families of software products in order to achieve sustained consumer appeal and brand name recognition.

Ease of use and interactivity are two main design principles behind Broderbund product design.

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In recent years, Broderbund has focused its product development efforts in the areas of creativity, entertainment, and education. In line with this approach, Broderbund seeks to develop products that appeal both to the primary user and to third parties, particularly teachers and parents. The company believes that the educational content in its products make them popular with teachers and parents without diminishing the entertainment value to students.

New product development efforts will focus on the CD ROM platform, but Broderbund intends to continue to manufacture existing floppy products while there is a market for those products, particularly in the education sales area.

- Also during fiscal 995, the company upgraded its major products to incorporate significant consumer features of Windows 95.

- During fiscal 1996, Broderbund intends to introduce native Windows 95 products.

Financials

Fiscal 1995 revenue reached $171,6 million, a 54% increase over fiscal 1994 revenue of $111.8 million. Net income was $36.2 million, a 227% increase over fiscal 1994 net income of $11.1 million.

A five-year financial summary follows:

Broderbund Software, Inc.
Five-Year Financial Summary
($ Millions, except per-share data)

	Fiscal Year				
Item	8/95	8/94	8/93	8/92	8/91
Revenue	$171.6	$111.8	$95.6	$75.1	$55.8
• Percent change from previous year	54%	17%	27%	35%	11%
Income before taxes	$61.7	$19.8	$21.9	$15.5	$11.6
• Percent change from previous year	(a) 211%	(b) (10%)	42%	33%	14%
Net income	$36.2	$11.1	$13.6	$9.7	$7.1
• Percent change from previous year	227%	(19%)	41%	37%	122%
Earnings per share	$1.72	$0.55	$0.68	$0.49	$0.38
• Percent change from previous year	213%	(19%)	39%	29%	121%

(a) Includes equity in income of approximately $3.9 million from the Living Books joint venture.

(b) Includes costs of $11.0 million associated with a terminated merger.

The growth in revenue during fiscal 1995 reflects strong consumer demand for the company's products. Also contributing to revenue growth was the number of new products released in both the published and affiliated label areas.

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- During fiscal 1995, Broderbund released 77 new products, as compared to 68 products in fiscal 1994, and 44 products in fiscal 1993.

- The new product releases included new titles, upgrades to existing titles, and transfers of existing titles to new hardware platforms.

- Revenue from entertainment products showed the highest growth rate at approximately 150% in fiscal 1995, compared to more than 200% in fiscal 1994.. Growth in the entertainment category, which typically has shorter life cycles than the rest of Broderbund's product lines, was led by the continued success of *Myst*.

- The Other Published Products category posted growth of 86% during fiscal 1995, up from a decline of approximately 6% during fiscal 1994, primarily due to the success of *3D Home Architect* and the acquisition of Banner Blue Software, publisher of the leading selling genealogy program, *Family Tree Maker*.

- The Print Shop family and Living Books both grew approximately 50% during fiscal 1995, primarily due to expansion of the product lines.

- The Early Learning group grew 38% during fiscal 1995 mainly from new product introductions, an increase from 3% growth in fiscal 1994, which was prior to the Early Learning products being upgraded from the DOS platform.

- Revenue from the Carmen Sandiego family grew approximately 10% in fiscal 1995, up from a decline of 24% during fiscal 1994. The primary products in the Carmen Sandiego family (World, USA, and Junior) showed growth in fiscal 1995 while some of the other titles in the family, which have not been converted to the CD ROM platform, declined.

- Affiliated labels, other than Living Books, declined 20% during fiscal 1995 and 45% in fiscal 1994 primarily due to the turnover in affiliated label companies. Some of the Broderbund's newer affiliated label companies, such as Starwave Corporation and The Logic Factory, Inc. will not release products until 1996.

Research and development expenses were approximately $22.8 million (13% of revenue) in fiscal 1995, $16.0 million (14% of revenue) in fiscal 1994, and $13.7 million (14% of revenue) in fiscal 1993. Increases in fiscal 1995 were due primarily to the introduction of new products, the conversion of products to Windows 95, and the localization of products into foreign languages for international markets.

Revenue Analysis by Product/Service

Broderbund's fiscal 1995 revenue was derived approximately as follows:

Print Shop products	30%
Carmen Sandiego products	10%
Early Learning products	10%
Living Books	13%
Entertainment products	24%
Affiliate label products	5%
Other *	8%
	100%

* *Includes reference products and other printing, graphics, and home productivity products*

Sales from products on CD ROM accounted for approximately 80% of revenue in fiscal 1995, compared to 40% in fiscal 1994, and less than 10% in fiscal 1993.

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The mix of revenue by hardware platform in fiscal 1995 was nearly 80% of revenue from Windows/DOS products and 20% from Macintosh products.

Interim Results

Revenue for the nine months ending May 31, 1996 reached $154.0 million, up 15% from $134.4 million for the same period in 1995. Net income was $41.0 million up from $29.0 million for the same period a year ago.

- During the second quarter of 1996, Broderbund recorded a pretax gain of $15.5 million arising from a breakup fee received in the terminated merger with The Learning Company.
- Exclusive of the one-time gain, net income for the nine months ending May 31, 1996 was $31.7 million.

Market Financials

Broderbund's products are sold to the home/consumer, school, and small business markets.

Geographic Markets

INPUT estimates approximately 95% of Broderbund's fiscal 1995 revenue was derived from the U.S. and the remainder from international sources.

Acquisitions

In April 1995, Broderbund acquired Banner Blue Software, a publisher of genealogy software, for 607,000 shares of Broderbund common stock. The acquisition was accounted for as a pooling of interests.

- Banner Blue markets the Family Tree Maker line of products that help organize family histories and find ancestors.
- Banner, founded in 1984, had 75 employees at the time of the acquisition and offices in Fremont (CA) and Provo (UT).
- Because the operating results for Banner Blue Software were not material to the combined results of Broderbund and Banner Blue, Broderbund's financials prior to the acquisition were not restated.

Employees

As of August 31, 1995, Broderbund had 563 employees, segmented as follows:

Sales, marketing, and customer service	178
Product development	203
Manufacturing and shipping	134
Administration and finance	48
	563

The company currently has approximately 625 employees.

Key Products and Services

Broderbund offers products in three consumer software categories—home productivity, education, and entertainment. The company's key products in each of these categories are described below.

Home Productivity Products

The Print Shop family of products, contributing 30% to fiscal 1995 revenue, has sold more than nine million units since the original title was introduced in 1984.

- *The Print Shop* allows users to make personalized signs, banners, stationery, labels, greeting cards, and other personal documents
- In addition to the latest release, *The Print Shop Deluxe CD Ensemble,* other products in the family include *The Print Shop Deluxe*

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Companion, several graphics folios, and *Ensemble II.*

- *The Print Shop* family of products range in price in stores from approximately $20 to $90.

3D Home Architect is a visualization and design tool. The current CD ROM version allows amateur home designers and remodelers to layout rooms or entire houses, complete with furnishings, and then view three-dimensional renderings of their work.

Through Banner Blue Software, Broderbund offers the following productivity products:

- *Family Tree Maker* genealogy software
- *Org Plus,* an organizational charting tool
- *Family Archives,* CD ROM collections of family historical data

Education Products

The *Carmen Sandiego* family of products, contributing 10% to fiscal 1995 revenue, is a series of games that are designed to motivate the player to learn more about geography and history by unraveling cultural clues. Each of the titles in the *Carmen Sandiego* family of products uses the same basic theme and story line in exposing the player to different bases of information.

- The newer releases of *Carmen Sandiego* products, *Where in the World is Carmen Sandiego?, Where in the USA is Carmen Sandiego?*®, and *Carmen Sandiego Junior Detective Edition*™, all available for Windows and Macintosh CD ROM, feature digitized images, enhanced audio capabilities, and expanded information bases. These products are accompanied by a reference book which the user can consult in solving the mystery.
- Broderbund has sold more than five million units of *Carmen Sandiego* products since the first product in the series was released in April 1985.
- The price of *Carmen Sandiego* products in the stores ranges from approximately $30 to $70.

The Early Learning family of products, contributing 10% to fiscal 1995 revenue, assists children in acquiring basis skills and developing creativity.

- The *Active Mind Series* is a growing line of single-subject educational software built with input from educators to tie into specific school activities. The initial members of the *Active Mind Series* are *The Playroom, James Discovers Math*™, *Math Workshop,* and *The Logical Journey of the Zoombinis*™. *Write, Camera, Action!* was released in July 1996. Each product teaches a different set of essential skills to children between the ages of 3 and 12.
- The StoryQuests™ series of adventure stories, developed in partnership with Capitol Multimedia, allows children ages 4 to 8 to embark on challenging adventures while helping them to obtain essential learning skills, such as logical reasoning, problem solving, phonics, creative arts, letter recognition, and counting. The series is available on Windows and Macintosh CD ROM format.
- The ImagiMaker Series™ is a line of painting, drawing, animating, and creative writing programs for children ages 3-12. Included in the series is *Kid Pix, Kid Pix Studio,* and *The Amazing Writing Machine*™.

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- Other early learning products include *The Treehouse®, The Backyard™,* and *Alien Tales™.*

- Broderbund develops materials to help teachers integrate its products into curriculum. Teacher's Guides, which are developed by educators and classroom tested, include thematic units, suggested activities for individual students, group activities, annotated bibliographies, reproducible activity sheets, audio or video cassettes, books for classroom libraries, and other materials.

- Lab Packs or Network and Site License versions of Broderbund products offer economical pricing for educators to supply multiple workstations in a school setting.

Broderbund now offers The Learning Advantage Library™ series, which features four collections (based on distinct age groups) of Broderbund products for children that help development essential skills in reading, writing, math, geography, art, and creativity.

Entertainment Products

Entertainment products contributed 24% to fiscal 1995 revenue.

Key products in this category include *Prince of Persia™, Prince of Persia 2: The Shadow and the Flame™, Myst, In the 1st Degree,* and *Learn the Art of Magic™.*

Affiliated Labels Products

Affiliated label products distributed by Broderbund are generally marketed under the name of the affiliated label company and distributed exclusively by Broderbund. Excluding Living Books, affiliated label revenue was 5% of Broderbund's total revenue in fiscal 1995.

Broderbund currently has 14 affiliated label publishers, including:

- Against All Odds Products
- Amtex Software Corp.
- Blue Sky Entertainment
- Cyan, Inc.
- Headbone Interactive
- I Motion Inc.
- Inroads Interactive, Inc.
- Live Picture, Inc.
- Paragraph International
- Presto Studios Inc.
- Splash Studios, Inc.
- Starwave Corporation
- Sunset New Media
- The Logic Factory
- Tsunami Media, Inc.
- Vicarious Entertainment
- Williams-Sonoma
- Living Books

Living Books is a joint venture between Broderbund and Random House to publish the *Living Books* line of CD ROM-based interactive, animated storybooks for children which allow children to learn, listen, and explore. In fiscal 1995, Living Books sales were approximately 13% of Broderbund's revenues.

Support Services

Broderbund provides telephone support.

On-line technical help to Broderbund Software customers is available via the Internet using Inference Corp.'s CBR2 knowledge publishing and distribution technology. Broderbund customers have 24-hour access to solve most software problems.

Marketing and Sales

Broderbund sells its products through distributors, software specialty retail chains, computer superstores, mass merchandisers,

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discount warehouse stores, educational dealers, and directly to users.

Broderbund's two largest distributors in fiscal 1995 accounted for approximately 22% and 13%, respectively, of total revenue.

Broderbund's 33-person national sales staff covers the U.S. and Canada and operates out of U.S. offices.

A subsidiary in England markets and distributes localized versions of the company's products to major European markets.

Broderbund has distribution arrangements in Australia, Southeast Asia, and Japan.

International distributor agreements grant the exclusive right to distribute Broderbund products in specific geographic territories. In some cases, the distributor purchases finished goods for resale. In other cases, the distributor develops a foreign language version and pays Broderbund a royalty on sales of such products.

Broderbund has a separate 11-person education group to focus on sales to schools.

Affiliated label products distributed by Broderbund are generally marketed under the name of the affiliated label company.

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Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

April 1996

BSG Alliance/IT, Inc.

Chairman, President & CEO: Steven G. Papermaster
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Austin, TX 78701
Phone: (512) 703-1000
Fax: (512) 320-8377

Leading the change. Together.™

Status:	Private
Employees:	600 (3/96)
Revenue:	$69,700,000
Fiscal Year End:	12/31/95

Key Points

- BSG has built a reputation as the next-generation information technology (IT) company using client/server and other emerging technologies to help customers meet their business goals and objectives.
- The company has capitalized on its success in the energy business and expanded its business and technology expertise into other industries, including multi-unit retail, manufacturing, insurance, transportation, telecommunications, pharmaceuticals, and consumer products.
- In March 1996, BSG and Medaphis Corporation announced a definitive agreement to merge, with BSG becoming a wholly owned subsidiary of Medaphis.
- In January 1996, BSG acquired Exact Systems, a systems integration company specializing in customer service, support, and management systems.
- BSG's revenues grew by 62% during 1995 to $69.7 million.
- In October 1995, the company relocated its headquarters to Austin (TX).

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Company Description

BSG Alliance/IT, Inc. is a next-generation IT services company, providing services that include client/server systems integration and management, business process innovation and change management consulting, skills transfer, and education. From its beginning, BSG has maintained a focus on client/server technology—a clear differentiation from other systems integrators.

In March 1996, Medaphis Corporation announced a definitive agreement to acquire BSG for approximately 7.5 million shares of Medaphis common stock and assumption by Medaphis of BSG stock options and stock rights representing an additional 2.66 million shares of Medaphis common stock.

- The transaction, valued at an estimated $350 million, will be accounted for as a pooling of interests and is expected to close by the end of June 1996.
- The acquisition will bring significant client/server capabilities to Medaphis and form the basis for an aggressive program of expansion of Medaphis' information technology services business.
- BSG will become a wholly owned subsidiary of Medaphis. Steven G. Papermaster will remain chairman, president and chief executive officer of BSG.
- Upon completion of the merger, Medaphis' systems integration and IT services companies (Imonics Corporation and Rapid Systems Solutions, Inc.) will operate under the BSG umbrella.
- Imonics Corporation, based in Cary (NC) with 350 employees and 1995 revenue of $45 million, provides information technology solutions to customer service organizations and other business operations that process large volumes of paper, faxes, or phone calls.
- Rapid Systems Solutions, Inc., based in Columbia (MD) with more than 200 employees and 1995 revenue of $14.7 million, provides client/server systems integration and application development services.
- Based in Atlanta (GA), Medaphis provides business management systems and services, primarily to the health care industry.

Structure and Operations

Effective January 1995, BSG reorganized its three related operating units for education (BSG Education), consulting (BSG Consulting), and long-term systems development (BSG Alliance/IT) into a single operating company, BSG Alliance/IT, Inc.

Along with this organization change, the company has recruited a new, experienced group of executives for the management team.

- Steven G. Papermaster—Chairman, CEO and President—founded BSG in 1987.
- Key BSG executives are summarized in the exhibit.

BSG Key Executives

Name	Title
Steven G. Papermaster	Chairman, CEO and President
Robert E. Pickering, Jr.	EVP, Operations/Market Development
Norman D. Smith	EVP, Operations
David Lundeen	EVP, CFO

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BSG has offices in Austin, Dallas and Houston (TX); Atlanta (GA); Boston (Newton, MA); Chicago (Rosemont, IL); Minneapolis (Roseville, MN); New York (NY); Philadelphia (PA); San Francisco (CA); and Washington, D.C. (Landover, MD).

- Market Segment Leaders run each office with help from directors in each office. Projects are staffed by consulting professionals.

- The structure includes managers, supervisors, consultants, and support staff.

Corporate Culture

BSG believes that only by embracing change can companies successfully compete in the constantly accelerating business environment.

- The willingness to accept change and the ability to take a leadership role in defining and implementing far-reaching change is at the root of BSG's corporate culture.

- BSG's commitment to change includes changing the metaphors we live by in order to reshape the ways we live and work. BSG uses the term "metaphorphosis" to describe this ability to question basic assumptions and conceive new metaphors for action. For example, BSG employees hold their "reunions" or company meetings several times each year to underscore the accelerated pace of today's business world.

- Within the BSG community, people and functions are frequently redeployed to meet changing needs.

Company Strategy

BSG's mission is to partner with its customers for successful transformation of their businesses through technology. Its strategy is to develop long-term relationships with customers (in BSG's words, "alliance/IT programs," as opposed to the traditional nomenclature of "systems integration" or "outsourcing contracts") and provide not just client/server technology services, but also change and business process management services.

"High Performance IT" is BSG's unique services approach for teaming with customers to change their business and technology processes.

- More than just another big systems development life cycle methodology, High Performance IT addresses change in all areas affecting a company's IT processes—its *people*, *processes*, and *technology*.

- To do this, the BSG/customer team works through several stages of creating, much like the stages in building a house. The stages range from understanding and blueprinting the new business and technology processes, to implementing and sustaining changes in the new processes.

- Although each of these stages is important, High Performance IT is action oriented. This is best represented by "quick hit" initiatives with immediate payback, like the rollout of an interdepartmental network and multiple Lotus Notes applications to capture and manage forms. These quick hits may occur through each stage, while more complex applications and process changes are being delivered.

Partnership is central to BSG's strategy. BSG co-manages projects with its customers and shares with them in both risks and rewards. The company pursues partnerships in three ways:

- Through joint development, capitalization and support of specific *product offerings*;

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- Through *joint ventures* offering complementary services on a global basis; and

- By *partnering with its customers* to manage each step of the business transformation process from the boardroom to the desktop—a partnership BSG refers to as *Alliance/IT*.

The *joint enterprise* between BSG and Philips Communications and Processing Services, a fully owned subsidiary of Netherlands-based Philips Electronics N.V., is an example of a services-based partnership, giving BSG a partner in Europe and Philips a consulting partner in the U.S. In addition, BSG works with various divisions of Philips.

An *alliance/IT partnership* is a guiding principle in all of BSG's relationships with its clients. BSG partners with clients, vendors, and other service providers to achieve specific goals, and assumes both the risks and the rewards of working together.

- This willingness to share the risks along with the gains sets BSG apart from traditional systems integrators, who typically limit their involvement to assigned tasks under contract.

- BSG's multiyear, multimillion-dollar contract with Phoenix Newspapers, Inc. (PNI) to provide complete technology transfer services typifies the extensive, long-term partnerships BSG forms with its clients.

Financials

BSG is currently privately held and has experienced strong growth from its beginning.

BSG's 1995 revenue reached $69.7 million, up from $43 million in 1994, $26.5 million in 1993, and $12 million in 1992. The company is profitable.

Market Financials

One hundred percent of revenue is derived from the commercial market.

BSG's targeted vertical markets include the following:

- Energy and petrochemicals
- Entertainment
- Pharmaceuticals
- Multi-unit retail
- Transportation and distribution
- Manufacturing
- Insurance and financial services
- Communications

Geographic Markets

Approximately 95% of BSG's 1995 revenue was derived from the U.S. and 5% from international sources.

Acquisitions

In January 1996, BSG acquired Exact Systems, Inc. of Minneapolis (MN). Terms of the acquisition were not disclosed.

- Exact Systems is a systems integration company that specializes in customer service, support, and management systems.

- The acquisition strengthens BSG's expertise in implementing and customizing customer-focused business processes and systems for customers in industries such as energy, financial services, manufacturing, pharmaceuticals, and telecommunications.

- BSG also gains a suite of tools for customer service systems developed by Exact through a partnership with Vantive Corporation, a provider of customer service, support and management software.

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- Exact's staff forms the core of BSG's new office in metropolitan Minneapolis.

Employees

BSG's total staff consists of 600 employees, segmented as follows:

Consulting	68%
Marketing and sales	5%
Training and education	2%
General and administrative	15%
Other (technology/R&D)	10%
	100%

Key Services

BSG offers the following services:

Business Transformation Services

- Business Process Reengineering
- Downsizing Information Systems
- Document Imaging and Management
- Network Assessment
- Systems Maintenance
- Distributed Systems and Applications
- Client/Server Systems Planning and Development
- Packaged Software Solutions
- Change Management and Knowledge Transfer
- Project Management
- Technical Architecture Development
- Disaster Recovery Planning and LAN Audit

Technologies Used

- Object-Oriented Design and Development
- Workflow and Document Management
- Data Warehousing
- Wireless Communications
- Windows-based Front-end Development Tools
- High-Performance Networks
- Distributed Groupware
- Database Server Engines

Key Products

BluePrint™ for PowerBuilder is an object development environment (ODE) for PowerBuilder.

Enterprise Framework for Forté is an ODE for the Forté development tool.

BSG SMARTS is a suite of computer-based tools assisting a BSG customer with evaluating staff skills, setting up a program of learning tailored to their needs, and measuring the results of the program.

BSG books include a series of technical and general computer industry books that BSG has developed, including a book in development for late 1996 release titled *Development of the Corporate Intranet* (with John Wiley & Sons). The series includes best-sellers like *Client/Server Computing* (with Prentice Hall).

Clients

BSG has delivered client/server solutions to customers in energy, manufacturing, financial services, retail, entertainment, pharmaceuticals, telecommunications, transportation, and other major industries.

- The BSG customer is a company that seeks to transform its business, by either fundamentally changing its business processes or entering whole new markets with new products and services.

- Often, when the velocity of change in an industry threatens the very life of the business, the transformation must take place quickly. In almost every case, customers call on BSG to provide services that go beyond technology development, calling upon the people and process change services that BSG offers through High Performance IT.

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BSG's customers range from ARAMARK to Zeneca, including such companies as Ameritech, American General Life, Berlex Labs, Boston Market, Coca Cola, CNBC, Enron, Entergy, Exxon, FoxMeyer, General Electric, Hoffman La-Roche, Kirby Corp., Ruby Tuesday, Phoenix Newspapers, Inc., Shell Oil, Sony, Sprint, and Tenneco.

Contracts

Some specific examples of BSG's work include the following:

- Shell Oil, one of the 20 largest industrial companies in the U.S., replaced manual processes with a document imaging system that handles 800,000 pages per month, reducing response times for document requests from days to seconds, winning the prestigious Shell President's Award for Team Excellence.

- Phoenix Newspapers, Inc., publisher of the *Arizona Republic*, the 16th largest daily newspaper in the U.S., launched a client/server computing initiative that spans every department (including finance, human resources, circulation, advertising, plant operations and billing) and enables PNI to transform itself into a responsive, customer-driven organization poised to take advantage of emerging market opportunities such as digital newspapers and interactive media.

- Ruby Tuesday, Inc. (RTI) was a division of Morrison Restaurants Inc., an over 80-year-old company providing food services through three distinct lines of business: health care, family dining, and casual dining. In mid-1995, Morrison split into three separate companies. RTI, which includes specialty restaurants such as Ruby Tuesday, Tia's Mexican, and Mozzarella's Italian, embarked on an enterprise-wide effort involving management and strategy, store systems, distributed databases, groupware, ongoing technical architecture, deployment and support, with BSG as its technology partner.

Marketing and Sales

BSG markets its products and services through a direct sales force of approximately 15.

BSG's marketing strategy includes:

- Newsletters
- Formal breakfast meetings
- Network meetings with present and prospective clients
- Focused public speaking
- Press and analyst relations
- A strong reputation within the SI market

Alliances

BSG has always worked to forge strong bonds with client/server software and hardware vendors.

- This bond is sometimes informal, based on BSG's knowledge and use of the products, and sometimes formal, through the programs that a vendor has for systems integrators and other consultants.

- Developing these relationships enables BSG to provide its customers with the latest information about a vendor's strategic directions, the strengths and limitations of a vendor's products, access to technical support and sales assistance, depending on the customer's needs, and occasionally special pricing on the vendor's products. This allows BSG to resell a vendor's

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products as components of a comprehensive technology solution, which many customers prefer because of better coordination and more effective team building among the various product providers.

Another advantage of BSG's vendor relationships is the company's use of the vendors' products in BSG lab environments (sometimes referred to as "proof of reality" as opposed to proof of concept) to evaluate the technical challenges BSG customers face in implementing client/server technology.

- BSG has worked in the lab with a number of customers to prototype key components of their application solutions.
- BSG's labs also support BSG's investments in developing enabling technologies such as BluePrint/EF for PowerBuilder.
- Currently, BSG has projects in progress in the lab to develop enabling technology to address distributed Systems Management and Visual Basic application development.
- BSG is also an active participant in a number of beta programs.
- Some of the products that can be found in the BSG technology labs include: operating systems from Hewlett-Packard, Microsoft, Novell, and Sun; workstations and servers from Compaq, Dell, Hewlett-Packard, and Sun; client/server systems management software from BMC, Computer Associates, Hewlett-Packard, and Tivoli; database products from Informix, Microsoft, Oracle, and Sybase; application development tools from Centerline, Digitalk, Easel, Forté, Microsoft, Powersoft, ParcPlace, Symantec, and Trinzic; customer call center software from Vantive; imaging and document management solutions from Wang; groupware, mail, and messaging products from Lotus and Microsoft; and numerous additional products from many other vendors.
- In addition, BSG is actively pursuing research and has relationships with vendors in areas such as wireless data communications, data warehousing, message-based systems, workflow, imaging, and document management.

During 1994, BSG formed a partnership with Tenneco Gas subsidiary Energy TRACS to provide systems integration services on implementations of Energy TRACS' portfolio of national gas transportation systems and software.

Also during 1994, BSG formed a partnership with Philips Communications and Processing, a subsidiary of Netherlands-based Philips Electronics. Through the partnership—Alliance/IT, LLC—the two companies acquired Power Computing Company, a leading provider of outsourcing services.

Competitors

The traditional systems integrators—large organizations like EDS, Computer Sciences Corporation, Andersen Consulting and SHL Systemhouse—have adapted their mainframe-based practices to address the current demand for client/server solutions. BSG, however, has always focused solely on client/server computing as the basis for business transformation.

The best example of a more comparable competitor is Cambridge Technology Partners (CTP). However, there are major differences between CTP and BSG. CTP focuses on short-duration, fixed-fee projects for its customers. BSG focuses on long-term, multiproject relationships with customers. CTP has a fairly narrow scope of services (technology

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oriented) and technology (heavy UNIX orientation). BSG's scope contains these elements as well, but also offers change management and education services and develops applications that are multi-operating system and multiplatform.

INPUT Assessment

BSG's merger with Medaphis will provide BSG with:

- A more stable financial base. Medaphis is a $500 million company with a successful track record of having acquired 38 businesses since 1988.
- A broader customer base, including the target markets of Medaphis, Imonics and Rapid Systems Solutions
- Expanded systems integration and IT skills offered through Medaphis, Imonics and Rapid Systems Solutions
- A strong foothold in the health care services market

BSG brings its strong skills in client/server systems integration and consulting, business process innovation, and knowledge and skills transfer to the merger.

The company's key challenge over the coming year will be to successfully coordinate/integrate the operations of Imonics and Rapid Systems and exploit Medaphis' customer base.

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BRODERBUND SOFTWARE, INC.
500 Redwood Boulevard
Novato, CA 94948
Phone: (415) 382-4400
Fax: (415) 382-4671

Douglas G. Carlston, Chairman and CEO
Edmund R. Auer, President and COO
Public Corporation, NASDAQ
Total Employees 271 (8/91)
Total Revenue Fiscal Year End
8/31/91: $55,779,000

The Company

Broderbund Software, Inc., founded in 1980, develops and publishes microcomputer software products for the home, school, and small business markets.

- The company offers products primarily in two consumer software categories--personal productivity/graphics (*Print Shop*) products and education (*Carmen Sandiego*) products. Broderbund is also the exclusive North American distributor of entertainment products published by Maxis Software (*SimCity* and *SimEarth*).

- Broderbund's products typically employ sophisticated graphics, audio, and user interface technology and are designed to be easy to use.

- The products are available for popular personal computers including IBM, IBM compatible, and Apple Macintosh.

- Broderbund has sold over 13 million units of consumer software since its inception.

Broderbund's strategy is to identify and develop families of software products that achieve sustained consumer appeal and brand name recognition.

- In recent years the company has focused its product development efforts in the education and personal productivity market segments. Broderbund management believes that the successful products in these segments typically experience longer product life cycles than entertainment products.

- Near the end of fiscal 1991, Broderbund changed its international sales strategy from direct sales through foreign subsidiaries to licensing through foreign distributors. Although the company expects international net revenues to decline in fiscal 1992 as a result of this change, Broderbund expects higher

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gross margins on international net revenues to result from the new distribution arrangements.

In November 1991, Broderbund completed an initial public offering of approximately 3.3 million shares of common stock. All the shares were sold by stockholders.

Broderbund's fiscal 1991 revenue reached $55.8 million, an 11% increase over fiscal 1990 revenue of $50.4 million.

- Net income in fiscal 1991 reached $7.1 million, compared to net income of $3.2 million in fiscal 1990. Results for fiscal 1990 include losses of $3.1 million associated with Broderbund discontinuing the operations of its Nintendo Products Division in October 1990.

- A five-year financial summary follows:

BRODERBUND SOFTWARE, INC.
FIVE-YEAR FINANCIAL SUMMARY
($ millions, except per share data)

	FISCAL YEAR				
ITEM	8/91	8/90	8/89	8/88	8/87
Revenue	$55.8	$50.4	$36.8	$36.6	$27.0
· Percent increase from previous year	11%	37%	1%	36%	N/A
Income before taxes and extraordinary items	$11.6	$10.2	$4.3	$7.3	$6.3
· Percent increase (decrease) from previous year	14%	137%	(41%)	16%	N/A
Income (loss) from discontinued operations (a)	--	$(3.1)	$0.8	$1.2	$(0.2)
Net income	$7.1	$3.2	$3.4	$5.6	$3.0
· Percent increase (decrease) from previous year	122%	(6%)	(39%)	87%	N/A
Earnings per share	$0.75	$0.34	$0.36	$0.62	$0.34
· Percent increase (decrease) from previous year	121%	(6%)	(42%)	82%	N/A

(a) Reflects the operations of the company's Nintendo Products Division.

Broderbund management attributes revenue growth during fiscal 1991 primarily to the introduction of new products, increased

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demand for products that are published by third parties and distributed by Broderbund, the porting of existing titles to new hardware platforms, and the expansion of the company's sales efforts in school markets.

- New products introduced in fiscal 1991 include *The New Print Shop Companion, Kid Pix* (Macintosh version), and *SimEarth* (a Maxis Software product).

- Sales of older entertainment products and products on Apple II and Commodore platforms declined in fiscal 1991.

Research and development expenditures were approximately $7.1 million (13% of revenue) in fiscal 1991, $6.2 million (12% of revenue) in fiscal 1990, and $5.7 million (16% of revenue) in fiscal 1989.

Revenue for the three months ending November 30, 1991 reached $21.5 million, a 28% increase over $16.8 million for the same period in 1990. Net income rose 13%, from $3.0 million to nearly $3.4 million.

As of August 31, 1991, Broderbund had 271 employees, segmented as follows:

Sales and marketing	80
Product development	100
Manufacturing and shipping	57
Administration and finance	34
	271

Key Products and Services

One hundred percent of Broderbund's fiscal 1991 revenue was derived from its microcomputer software products.

- Approximately 33% of revenue was derived from sales of *The Print Shop* family of products, 26% from the *Carmen Sandiego* products, and 17% from the Maxis entertainment products.

Broderbund's products are summarized in the exhibit and include the following:

- *The Print Shop* family of products feature printing options for generating personalized signs, posters, banners, calendars, stationary, greeting cards, envelopes, and other personal documents.

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EXHIBIT

BRODERBUND SOFTWARE PRODUCTS

PRODUCT LINE	MONTH/YEAR INTRODUCED	SUGGESTED RETAIL PRICE
Personal Productivity Products		
Print Shop Family		
- The New Print Shop	5/84	$59.95
- The New Print Shop Companion	11/85	$49.95
- The New Print Shop Graphics Library Sampler Edition	11/87	$34.95
- The New Print Shop Graphics Library Party Edition	5/88	$34.95
- The New Print Shop Graphics Library School and Business Edition	9/89	$34.95
Other		
- Bank Street Writer Plus	11/82	$79.95
- BannerMania	8/89	$34.95
- TypeStyler (Macintosh only)	11/89	$219.95
Education Products		
Carmen Sandiego Family		
- Where in the World is Carmen Sandiego?	4/85	$49.95
- Where in the USA is Carmen Sandiego?	10/86	$49.95
- Where in Europe is Carmen Sandiego?	3/88	$49.95
- Where in Time is Carmen Sandiego?	8/89	$49.95
- Where in the World is Carmen Sandiego? (Deluxe edition)	9/90	$79.95
- Where in America's Past is Carmen Sandiego?	6/91	$59.95
Early Learning		
- The Playroom	10/89	$49.95
- Kid Pix	3/91	$59.95
- The Treehouse	10/91	$59.95
Entertainment Products		
SimCity	2/89	$49.95
Prince of Persia	10/89	$39.95
SimEarth	10/90	$69.95

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- *The New Print Shop* was developed by Pixellite Software and is published by Broderbund under a license agreement that extends to June 1993.

- Broderbund has sold over four million units of *The Print Shop* family of products.

· The *Carmen Sandiego* family of products is a series of games that are designed to stimulate the player's interest in and knowledge of geography and history.

- In addition to home use, the series is used in schools as an adjunct to geography and history classes as well as computer classes.

- Broderbund has sold over two million units of *Carmen Sandiego* products.

· Early Learning Products include programs of games and activities for younger children built around a theme of a child's playroom or secret hideaway, as well as a paint program created for children.

· Entertainment products include simulation and arcade-type game products.

Industry Markets

Broderbund sells its products through distributors, software specialty retail chains, computer superstores, mass merchandisers, discount warehouse stores, educational dealers, and directly to consumers and schools.

The largest of Broderbund's distributors are SoftKat, Ingram Micro, Kenfil, ABCO, and Merisel. During fiscal 1991, SoftKat and Ingram Micro accounted for approximately 19% and 14% of Broderbund's total revenues, respectively.

Geographic Markets

Approximately 88% of Broderbund's fiscal 1991 revenue was derived from the U.S., 8% from export sales, and 4% from foreign subsidiaries.

Broderbund's national sales staff operates out of seven offices located in California, Texas, Illinois, Pennsylvania, Georgia, and New Jersey.

The company also has distribution arrangements in Australia and certain European countries.

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Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

April 1996

Business@Web, Inc.

Chairman & CEO: Klaus P. Besier
One Arsenal Marketplace
2nd Floor
Watertown, MA 02172
Phone: (617) 923-6500
Fax: (617) 923-6565
Internet: Http://www.busweb.com

Status:	Private
Employees:	105 (4/96)
Revenue:	$6,000,000*
Fiscal Year End:	12/31/95

** INPUT estimate*

Key Points

- Business@Web (formerly Object Power Incorporated) provides software development tools, education, and consulting services to Internet-enable companies at multiple entry points in the IT process.
- In February 1996, former SAP America president—Klaus P. Besier—joined Business@Web as chairman and CEO.
- In February 1996, Hewlett-Packard (HP) formed an agreement with Business@Web to provide joint technology and marketing services. HP also made an equity investment in Business@Web.
- In the past several months, Business@Web has also announced partnerships with Baan Company, Deloitte & Touche Consulting/ICS, Informix, and NEC.
- In January 1996, Business@Web launched OpenScape™, reportedly the first component-based development environment that spans both the Internet and the enterprise (private Intranets).

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Company Description

Business@Web provides component-based software development and management tools, as well as technical education courses and consulting services focused on component software implementation to Internet-enable companies of all sizes.

Business@Web was founded in 1994 as Object Power Incorporated, a spin-off of Cambridge Technology Group.

In February 1996, the company changed its name to Business@Web to reflect its ultimate goal to help businesses increase their responsiveness and integrate traditional information systems and databases with the Internet.

Organization and Structure

Business@Web is headquartered in Watertown (MA).

Key executives of the company are listed below:

Business@Web Key Executives

Name	Title
Klaus P. Besier	Chairman & CEO
John Burke	VP Sales
Michael Fan	VP Product Management
Carolyn Logalbo	VP Marketing
John Nondorf	VP Strategic Alliances
Eric Sockol	Chief Financial Officer

Company Strategy

Business@Web is committed to the philosophy and practice of open computing and integration in an Internet environment and has focused on component technology—the melding of three-tiered client/server architecture and object-oriented design.

- Business@Web believes that component technology represents the most powerful tool aligning business and technology.
- The company believes it is currently the only vendor that provides a complete, system-wide, standards-based component-based business solution for the Internet.
- In addition to its component software development and management tools, the company provides planning, implementation and empowerment/education services to ensure the transfer of skills and knowledge to its customers. These services can be jointly provided with Business@Web's partners.

Financials

INPUT estimates that Business@Web's 1995 revenue reached approximately $6 million.

It is anticipated that 1996 revenue will reach $12 million.

Revenue Analysis by Product / Service

Business@Web's revenue is derived from software products, systems integration, migration, Internet and other technical and implementation services and education courses.

Market Financials

Business@Web has clients in virtually every industry, including financial services, insurance, discrete and process manufacturing, retail, telecommunications, wholesale, utilities, education, as well as government.

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Geographic Markets

One hundred percent of Business@Web's 1995 revenue was derived from the U.S.

Employees

As of December 31, 1995, Business@Web had approximately 75 employees. The company currently has 105 employees, segmented as follows:

Marketing and sales	30
Customer support	35
Research and development	25
General and administrative	15
	105

Key Products and Services

Business@Web's architecture is a standards-based distributed component architecture that combines a distributed three-tier client/server architecture with object-oriented design, allowing organizations to fully capitalize on code reusability.

OpenScape Products

OpenScape enables developers to create interactive Web pages, ActiveX controls, and OLE 2.0 objects.

- Graphical user interfaces assembled from reusable OpenScape components provide access to local databases such as Microsoft Access or Microsoft SQL Server.
- OpenScape enables the development of both visual components and business logic components that may access relational databases from Windows NT servers.
- OpenScape employs an intuitive point-and-click development environment with a Visual Basic-compatible scripting language. It can be used to build dynamic and attractive visual components for Internet applications.

OpenScape Enterprise is designed for development of robust, secure, high transaction volume applications used by large corporations over the Internet or corporate Intranet.

- It provides the capability to integrate legacy systems and/or packaged applications such as SAP R/3, Baan TRITON, and PeopleSoft.
- In addition, OpenScape Enterprise includes system utilities for managing a distributed environment that integrates heterogeneous systems.

OpenExtensions are offered to provide access to existing systems and computing environments from Internet or Intranet applications built with Business@Web software.

- OpenExtension for SAP allows developers to automatically generate business logic components that interface with SAP R/3 ABAP code via native SAP Remote Function Calls.
- OpenExtension for Middleware provides a means for developers to access existing enterprise servers built with the Open Software Foundation's Distributed Computing Environment and Open Environment Corporation's Entera middleware product. OpenExtension for Middleware is intended to Internet-enable existing servers by wrapping them in a generic component interface that may be called from browsers, such as Microsoft Internet Explorer and Netscape Navigator, and desktop OLE environments.
- Business@Web plans to release additional OpenExtension products.

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Services

The objective of Business@Web's suite of services is to assist organizations with their move into component technology. Services follow two primary paths—Solution-Based Services and Product-Based Services.

With implementation services, Business@Web will assess, scope, implement, and deploy mission-critical applications while ensuring technology transfer for future implementation. Services include:

- Initial on-site assessment
- Systems integration application scoping
- Systems integration application pilots
- Migration application staging and planning

With product-based services, the customer is allowed to pick the program modules needed to implement a project. Services include:

- Application-based component design workshop
- Technology transfer
- Component development session
- Custom component construction program
- Component management training

Internet services combine Business@Web's OpenScape technology and the above service methodologies to assist clients in linking their enterprise with the Internet. By leveraging Business@Web and Netscape, clients can build applications with distributed components for use on a corporate network (the Intranet) and then, as necessary, position this same application for use on the Internet.

Business@Web also works with various partners to provide customized solutions to its clients.

- Business@Web's Master Partner Program for Implementation and Integration provides Business@Web software tools, training, certifications, joint marketing, and support services at reduced rates to partners.

- Business@Web currently works in cooperation with Baan, Brainstorm Technologies, Cambridge Technology Group, Deloitte & Touche Consulting Group/ICS, Digital Equipment Corporation, Hewlett-Packard, IBM, I-CUBE, Informix, NEC, Open Environment Corporation, SAP, and Siemens Nixdorf.

Business@Web has provided consulting/systems integration services to more than 30 clients.

Education Services

Business@Web offers a series of educational courses and seminars in the following areas:

- *Technical OpenScape Program (TOP)* is a one week program to train technical professionals in creating, deploying, and managing OpenScape applications for the Internet and the enterprise.

- *Leveraging SAP's Architecture* is a five-day program designed to help companies understand and leverage SAP R/3 architecture and integration capabilities.

- *Business Component Methodology Seminar (BECOME)* is a two-day course related to distributed component architecture.

- *OpenScape Certification Program* is a program designed to certify developers in use of Business@Web's technology.

Clients

Business@Web currently has more than 15 customers that use its OpenScape products. A sample of clients includes NEC, Mercury Insurance, BC Transit, and Babson College.

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Marketing and Sales

Business@Web markets its products and services through a direct sales force and through its partnerships.

Alliances

Business@Web has alliances/partnerships/ marketing agreements with various vendors.

- *Baan* and Business@Web are jointly developing and marketing Internet-enabled client/server application solutions based on OpenScape and Baan's TRITON family of applications and tools.
- Through *Cambridge Technology Group*, Business@Web has a close working relationship with SAP and offers a number of SAP-related services.
- *Deloitte & Touche Consulting Group/ICS* and Business@Web are working together to provide solutions for SAP customers interested in building business applications for the Internet and private Intranets.
- *Digital Equipment Corporation* is working in conjunction with Business@Web on many of its application staging and planning engagements.
- *Hewlett-Packard* and Business@Web currently provide a joint offering titled the *Solution Blueprint* for both migration and systems integration projects.
- *IBM* and Business@Web currently offer a joint service titled *Fast-Track to Strategic Applications*. Business@Web has also worked with IBM in joint development projects.
- *Informix* and Business@Web are providing businesses with the first enterprise application development environment that integrates the Internet with rich media content, including video, audio, HTML, and other emerging data types. OpenScape will be bundled with Informix's Illustra enterprise multimedia database server.
- *NEC* and Business@Web have formed a joint development partnership to build next-generation workflow solutions that automate and integrate intra- and inter-business processes with enterprise systems.
- *SAP* and Business@Web have a close working relationship, with Business@Web now offering a range of SAP-related services that ease the integration of SAP R/3 with legacy systems, non-SAP client/server applications, PCs, existing systems, and future technologies.
- *Siemens Nixdorf* is currently working with Business@Web as a Master Partner in the Master Partner Program for SAP Implementation and Integration to deliver custom solutions for R/3 customers and prospects.

Other partners on various projects include Technology Group, I-CUBE, and Brainstorm Technologies.

Competition

Business@Web's major competitors include NeXT and Wayfarer.

Assessment

Business@Web's strengths include:

- Focus on business solutions
- Component-based technology
- Integration with existing legacy systems
- Three-tiered architecture

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Challenges over the coming year include:

- Managing growth
- Attracting high caliber, experienced employees

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INPUT VENDOR ANALYSIS PROGRAM
DIRECTORY

☐ New Entry ☐ Revised

Please provide as much data as known. Partially complete forms are welcome.

I. GENERAL INFORMATION

Vendor Name: _____

Address: _____

_____ Phone: _____

CEO/President: _____
Name Title

Key Contact: _____
Name Title

Total Employees: _____ Year Founded: _____

Company's Primary Business: _____

_____

Type of Ownership:

☐ Public ☐ Subsidiary

☐ Private ☐ Division

Parent Corporation _____

Subsidiaries: _____

Annual revenue $ _____ Fiscal Year Ending ____/____/____
Mo Day Yr

—or—Revenue Range:

☐ Under $1 Million ☐ $10-20 Million

☐ $1-5 Million ☐ $20-40 Million

☐ $5-10 Million ☐ Over $40 Million

What percent growth did the company experience over the previous year? _____%

What percent of your revenue is derived from:

U.S. _____% Canada _____%

Europe _____% Asia/Pacific _____%

Other International _____%

II. PRODUCTS AND SERVICES

What percent of your **U.S.** revenue is derived from information services (as defined by the eight service modes listed below)? _____%

What percent of **U.S. information services** revenue is derived from the following delivery modes:

1. Application Software Products _____%
2. Systems Software Products _____%
3. Processing Services _____%
4. Network Services _____%
5. VARs/Turnkey Systems _____%
6. Professional Services _____%
7. Systems Integration _____%
8. Systems Operations _____%

TOTAL 100%

What percent of U.S. information services revenue is derived from the following industry-specific/ cross-industry markets? (If percentages are not available, please indicate applicable areas with an "X".)

Industry-Specific

Banking and Finance	____%
Services (accountants, lawyers)	____%
Distribution	____%
Discrete Manufacturing	____%
Education	____%
Federal Government	____%
Insurance	____%
Local Government	____%
Manufacturing	____%
Medical	____%
Process Manufacturing	____%
Personal/Consumer Services	____%
Retail Distribution	____%
State Government	____%
Telecommunications	____%
Transportation	____%
Utilities	____%
Wholesale Distribution	____%
Construction/Agriculture	____%
SUBTOTAL	____%

Cross-Industry Application Solutions

Accounting	____%
Engineering/Scientific	____%
Education and Training	____%
Human Resources	____%
Office Systems	____%
Planning and Analysis	____%
Sales/Marketing/Other	____%
SUBTOTAL	____%

(Industry-specific + cross-industry = 100%)

Please briefly describe any alliances/joint ventures your company has:

1. _____
2. _____
3. _____

Any acquisitions? _____

Submitted by: _____ Date: _____

Please put INPUT on your mailing list and send product literature.
Thank You.

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Federal Government	____%	Planning and Analysis	____%
Insurance	____%	Sales/Marketing/Other	____%
Local Government	____%	SUBTOTAL	____%
Manufacturing	____%		
Medical	____%	(Industry-specific + cross-industry = 100%)	
Process Manufacturing	____%		
Personal/Consumer Services	____%		
Retail Distribution	____%		
State Government	____%		
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